

Can Civil Law Countries Get Good Institutions? Creditor Rights and Bond Markets in Brazil, 1850-2003.

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Abstract

Can we assume that the effect of early institutions is persistent over time? Work by La Porta, Lopez de Silanes, Shleifer, and Vishny, also known as the “law and finance” literature, implicitly argues that the legal tradition countries inherited or adopted in the far past has an important long-term effect on financial development. They argue financial development is related to the extent countries legally protect shareholders and creditors. Also, they find that countries that use the common law legal system have (on average) better investor protections than most civil law countries. I test three hypotheses that stem from the law and finance literature. First, I test if strong creditor rights are actually related to having larger bond markets once we look at a long time series. I look at the relationship between these two variables using data of creditor rights and bond market development in Brazil since 1850. I find support for this part of their argument. Second, I explore the supposed persistent relationship between legal origin and creditor rights. I argue that the variation in creditor rights is too large for us to believe that legal origin has a path-dependent and “stable” relationship with these rights. I provide a political economy explanation of the variation in creditor rights since 1850 in Brazil. Finally, I ask if the significant variation in creditor rights over time in Brazil is a case-specific phenomenon or if it in fact reflects a general trend in legal protections for creditors across countries. I do this by showing the state of creditor-right protections in a small cross-section of common and French civil law countries in 1910. I find a near reversal of relationships between legal origin and creditor rights in 1910: French civil law countries had stronger creditor rights than most of the common law countries included (except the U.K.).

Introduction

This paper studies the relationship among politics, institutions, and financial development. The general questions explored are: Can we assume that the statistical relationships between early institutions and today’s outcomes are stable over time? Or, in other words, is there truly a path-dependent effect of early institutions on current economic outcomes? The focus of the paper is on the relationship between early institutions, such as legal origin, and financial outcomes. The objective is to research how much variation we can find in the

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protection to investors and the levels of financial development within countries over time. I explore these questions by studying the variation of bond market size, creditor rights, and court enforcement of bond contracts in Brazil, a civil law country. At the end I generalize my results by showing preliminary results of creditor protections for a small cross-section of countries circa 1910.¹

Social scientists agree that institutions are important for economic development. However, we do not know which institutions generate economic prosperity and which ones are incidental to growth. Trying to find causal relationships, researchers have gone back in history to look for exogenous factors that might explain the variation in the levels of economic development around the world today.

In particular, social scientists have discussed whether the conditions at the time the former European colonies were settled led to the adoption of specific institutions that then had long-term effects on economic growth. The idea is that exogenous conditions determined certain formal institutions, such as legal regimes or specific voting and property-rights systems, that then had a long-term effect on the subsequent paths of institutional and economic development these countries followed. In fact, research based on current economic indicators has showed that there is a strong correlation between certain early institutions and today's development levels, suggesting that institutions might have a persistent effect over time.²

Similar logic and methods have been applied to understanding the determinants of financial development around the world. This is in part because there is a growing consensus among economists and economic historians that there are causal links between financial development and economic growth.³ In the case of financial markets, researchers have looked for

¹ Institutions are viewed here as sets of beliefs, norms, and organizational features that regularize and legitimize patterns of behavior. See, for example, Greif, *Institutions*; Aoki, *Toward a Comparative*; and North, *Institutions*.

² See, for example, Acemoglu, Johnson, and Robinson, "Colonial Origins;" and La Porta, Lopez de Silanes, Shleifer, and Vishny, "Law and Finance" and "Legal Determinants."

³ Economists and economic historians have been able to show some significant causal links between financial development and economic growth. For instance, King and Levine in "Finance and Growth" show that the level of financial intermediation is a good predictor of long-run economic growth. Levine and Zervos, in "Stock Markets," show that stock market liquidity and banking development positively predict growth. Also, there is evidence that firms that rely more strongly on external sources of finance to expand operations have grown disproportionately faster in countries that have more developed financial markets (see Rajan and Zingales, "Financial Dependence"). More recently, Rousseau and Sylla, in "Financial Revolutions," show that the development of a sophisticated financial system after the independence of the United States actually caused some of

a source of exogenous variation that might explain financial development across countries. One good candidate as a source of exogenous variance in financial market growth has been the variation in legal traditions countries follow, especially because the selection of legal regimes predates the creation of modern financial markets.

This methodological approach has been used by La Porta, Lopez de Silanes, Shleifer, and Vishny in a series of influential papers that I will refer to as the “law and finance” literature. In this body of work La Porta et al. argue that financial development is related to the legal protection of shareholders and creditors. Their econometric results look at a cross-section of countries in 1995 and show that countries with more legal protections for investors have larger financial markets. The idea is that the more the legal environment protects investors, the more likely they will be to participate in financial markets.⁴

Additionally, La Porta et al. argue that there are significant differences between the levels of investor protections in countries with different legal traditions. That is, they use the legal tradition countries follow as an exogenous variable to explain legal protections for investors (shareholders and creditors) across countries. They divide the world into four legal families—common law, French civil law, German civil law, and Scandinavian civil law—which comprise two legal traditions: common and civil law. Their statistical work shows that “common law countries have the strongest protection of outside investors—both shareholders and creditors—whereas French civil law countries have the weakest protections.”⁵ Other studies have extended the empirical work of La Porta et al. and argued that what determines financial development is not only the legal tradition countries follow but how former European colonies actually adapted these legal systems.⁶

the rapid growth in the first part of the nineteenth century. A good survey of the works in economic history linking finance to growth can be found in Rousseau and Sylla, “Financial Revolutions.”

⁴ For instance, see La Porta et al., “Law and Finance,” “Legal Determinants,” and “Investor Protection” or La Porta and Lopez de Silanes, “Creditor Protection.”

⁵ La Porta et al., “Investor Protections,” p. 8.

⁶ According to Berkowitz et al., “Economic Development,” what determines the extent of rule of law is a measure of capacity to adapt the law to local conditions. In a different stream of the literature, Beck, Demirgüç-Kunt, and Levine, in “Law and Finance,” find that legal origin does not affect financial development beyond its ability to explain cross-country variation in legal system adaptability. Adaptability is measured using a variable that describes how much a country’s legal system is case law based. According to these authors, case law was adopted as a source of law in civil law countries in Europe but not in former European colonies. Finally, Beck, Demirgüç-Kunt, and Levine, in “Law, Endowments, and Finance,” apply the methodology of Acemoglu, Johnson, and Robinson, “Colonial Origins,” to study financial development and find that “endowments explain a greater amount of the cross-country variation in financial intermediary and stock market development than legal origin” (p. 159).

Methodological approaches that link early institutions to current economic outcomes in cross-sectional regressions (or even in instrumental variables regressions), such as the “law and finance” approach, are explicitly historical in their theoretical setups and, simultaneously, make history irrelevant for their studies. On the one hand, the models are historical: at an earlier time, events determined a set of institutions (e.g., legal traditions) that then set countries down particular paths of economic development. On the other hand, these studies do not actually do historical research. Historical processes are assumed to happen the way they do because institutional variables included in the regressions, such as legal tradition, are highly correlated with current measures of legal protections to investors and financial development. Indeed, the law and finance literature is explicit in its historical claims: “history has persistent effects.”⁷

The implications of the law and finance literature can be tested in two ways using historical evidence. First, we can test if the development of financial markets actually went hand in hand with investor protections in general. Second, if legal traditions or early institutions have a path-dependent quality, we should not expect to find much variation over time in outcomes and investor protections within cases. Otherwise it would be hard to believe early institutions have a stable relationship over time with these outcome variables. But, also, we should not find drastic changes in the cross-sectional relationship between legal origin and creditor rights.

Preliminary results on the last part of the test were presented by Rajan and Zingales. They looked at the variation of financial market size in 23 countries, every decade, from 1913 to 1999. Figure 1 summarizes their main findings. It plots their results as the average stock market capitalization over Gross Domestic Product (GDP) in these 23 countries, grouped by legal family. All the legal families had a great reversal in financial market development (less in the common law tradition) after 1929. The size of their financial markets decreased rapidly and did not recover until the very end of the century. More importantly, in 1913, countries from the French civil law tradition had higher market capitalization over GDP ratios, on average, than their common law counterparts.⁸

However, legal origin explains cross-country differences in private property rights protection even after controlling for initial endowment indicators (p. 175).

⁷ La Porta et al., “Investor Protection,” p. 12.

⁸ Rajan and Zingales, “Great Reversals.”

Rajan and Zingales, in “Great Reversals,” argue their evidence goes against the stable differences we would expect to find among legal families according to the law and finance literature. They propose an interest-group theory to explain the trends they find in financial market development. In their view, incumbent businesses opposed financial development because it could breed competition once international cross-border trade and capital flows decreased sometime after World War I. Using openness to trade and capital as their main exogenous variables (instrumented using the country’s distance to its trading partners), they argue that countries which remained more open to trade had less of a radical reversal in financial development after the Great Depression.

These authors, however, did not develop a study of what happened to investor protections throughout the twentieth century. They have a model that explains how incumbent business groups (sometimes using labor as an ally) changed the institutional framework to repress financial development after World War I. But we do not know which laws were changed by which groups and how. In fact, their political economy story is based on stylized facts of some of the countries they study. Finally, they did not provide evidence of what happened to bond markets in the twentieth century.⁹

In this paper I test some of the implications of the law and finance literature looking at creditor rights and bond markets in Brazil. To test implications of the law and finance literature, I separate the test of its hypotheses into three parts. First, I test if strong creditor rights were necessary for the development of bond markets in Brazil. I look at the relationship between these two variables using the data of creditor rights and bond market development in Brazil since 1850. I find support for this part of their argument. Creditor rights seem to have been necessary institutional conditions for bond market development.

Second, I explore the supposed path-dependent relationship between legal origin and creditor rights. For this purpose I look at the variation of creditor rights over time. I argue that the variation in creditor rights is too large for us to believe it has a path-dependent and “stable” relationship with legal origin. I give more weight to the political economy perspective and describe the political conditions that explain the variation of creditor rights since 1850.

⁹ The exception is the case of Japan, for which they explain how government regulation after WWII repressed bond markets and drove companies to substitute bonds for bank credit. See Rajan and Zingales, “Great Reversals,” pp. 39–40.

Third, I ask if Brazil is a unique case or if it can help us to understand a more general trend in legal protections for creditors across countries. I generalize the results I have for Brazil by showing the state of creditor-right protections in 1910 in a small cross-section of common and French civil law countries. I look at the creditor protections included in the bankruptcy laws of the United States, the United Kingdom, Hong Kong, the Strait Settlements, France, Spain, Belgium, Argentina, and Brazil. The results support my argument in two ways. First, I find a near reversal of relationships between legal origin and creditor rights in the whole cross-section. Within the small sample of countries I chose, French civil law countries circa 1910 had stronger creditor rights than most of the common law countries included (except the U.K.). Second, I show significant within-country variation both in civil and common law countries. While today common law countries are strong protectors of creditors, around 1910 they tended to have bankruptcy laws that provided judges more flexibility to protect debtors. In French civil law countries the story is the opposite, while today the bankruptcy laws of these countries are very pro-debtor, in 1910 these laws tended to protect creditors strongly.

Brazil is a good natural laboratory to test the hypothesis that early institutions, such as legal origin, have path-dependent effects on institutional and financial development in the long run for at least three reasons. First, it is a developing French civil law country. Second, according to the classifications of La Porta et al., Brazil ranks among the worst countries in terms of creditor rights in 1995. Third, all the current indices of rule of law show that, in Brazil, the enforcement of property rights is poor. Today, Brazil is a country with a terrible record of contract enforcement, corruption, and government repudiation of contracts and a relatively bad environment in which to do business.

In order to study the variation within the recent history of Brazil, I look at the evolution of debenture markets and creditor rights since 1850.¹⁰ I show that the total stock of private bonds in Brazil was larger at the beginning of the twentieth century than today. I also maintain that the great reversal that Rajan and Zingales find for equity markets is more pronounced in the bond

¹⁰ Debentures are the most common corporate bonds in Brazil since the end of the nineteenth century. These bonds usually have real assets as collateral and are senior to other private debt during bankruptcy since 1890. Seniority over the government and labor during bankruptcy changed throughout the period of study.

market. Today, in Brazil, the stock of bonds has not reached its 1913 level, even though bond trading has increased rapidly since 1994.

The first part of the test shows that the early episode of bond market development in Brazil went hand in hand with strong creditor protection, just as the La Porta et al. model would have predicted. Creditor rights were relatively strong in Brazil between 1889 and 1940, which overlaps with a bond market bonanza (1890-1920). Between 1850 and 1908, Brazil had the four protections for creditors La Porta et al. consider relevant for the development of bond markets. I also found that these creditor rights were strongly enforced by the commercial courts of Brazil.

Creditor rights in Brazil before 1930 were not only strong on paper, but there is evidence they were strongly enforced by the courts. Revisions of the bankruptcy court cases of large corporations that issued bonds available at the National Archive in Brazil show that creditor rights were enforced following bankruptcy law closely. For instance, there is research showing that bondholders had priority in case of bankruptcy. Also, once a judge declared a company bankrupt, creditors were in control of the firm; they could replace managers immediately and recoup their claims by reorganizing or liquidating the company.¹¹

The second part of the argument is about the variation in creditor rights over time. I argue that there is too much variation over time in these rights for them to be explained significantly by such a factor as legal origin. I rely on the political economy approach to explain the variations in creditor rights and their relationship with bond markets. Berglöf and Rosenthal, explain that bankruptcy law in the United States was the product of an ideological divide in Congress between those legislators supporting the use of state bankruptcy laws for debtor relief (after crises) and those legislators looking for a federal bankruptcy law with a pro-creditor bias. Mark Roe argues that societies that protect workers strongly tend to have weak investor protections. In Europe and Japan, protections for workers were a consequence of an important shift in social preferences after World War II. Perotti and von Thadden build a model to show how societies exposed to high inflation in the 1920s moved toward more protection for labor and more concentrated ownership (either by banks, the state, or families) after the Great Depression. This explains why societies that have stronger protections for labor tend to protect investors poorly. Finally, Pagano and Volpin have a model that explains the political conditions that determine

¹¹ See for instance Musacchio, "Ordem," pp. 63-65.

higher or lower protections for shareholders across countries of the Organization for Economic Cooperation and Development (OECD).¹²

In Brazil the political economy of the creditor-right story is very similar to what happened in Europe. It started out with strong protections for creditors that were eroded once the labor movement became a powerful political force in the 1930s. It seems as though politics in Brazil, as in Europe, was more important to understanding the variations in investor protections at the country level than legal origin alone.

Brazil had laws strongly protecting creditors since colonial times. The commercial laws approved by the Portuguese crown in the late part of the eighteenth century were tough on insolvent debtors. After independence, Brazil's imperial government adopted Napoleon's Code of 1807 (and the variations of it adopted in Portugal), which considered defaulted debtors as criminals and recommended jail sentences. The monarchy that ruled Brazil from 1821 to 1889 was a constitutional monarchy with a representative congress in charge of drafting all laws regulating economic activity. The first domestic laws introducing protections for creditors were included in the Commerce Code of 1850. The 1850 Commerce Code and subsequent laws on joint stock companies protected creditors strongly, but they were not aimed at the specific protection of bondholders. Bondholders did not have first priority among creditors during bankruptcy until 1890.

In 1889, the monarchy was overthrown by a republican movement that had a strong coalition of merchants and investors as supporters. In January of 1890, Rui Barbosa, the first republican minister of finance, introduced a series of pro-business measures that eased entry and included protections for bondholders. Between 1850 and 1945 bankruptcy legislation gave creditors most of the control in the process of reorganization and liquidation, and corporate bondholders received priority over any other creditors (especially between 1890 and 1908).

Most of the creditor protections disappeared from the bankruptcy law in 1945 when dictator Getúlio Vargas passed a new law that favored labor and the tax authorities over secured and unsecured creditors. Labor was one of Vargas's main constituencies, and providing protections for this group was part of a strategy to increase popular support for his regime and to win votes for the upcoming election. This explains why Vargas established a bankruptcy system

¹² See Berglöf and Rosenthal, "Political Economy;" Roe, *Political Determinants*; Perotti and von Thadden, "Political Economy;" and Pagano and Volpin, "Political Economy."

that gave priority to workers and the government, leaving bondholders and other secured creditors in third place. From 1945 on, bankruptcy laws and their enforcement were focused on the continuation of business.

In 1945, the government could decimate creditor rights without major complaints from investors because bonds had lost most of their investor appeal earlier in the century. Bonds lost popularity after 1914, once international capital flows contracted and the gold standard was abandoned. By the time the 1945 bankruptcy law was passed, the bond market was too small for any significant bondholder opposition to take place. In fact, by 1945 most domestic investors interested in fixed-income investments could buy preferred shares. Preferred shares were introduced in 1932 and worked as substitutes for bonds because they offered a minimum fixed dividend and first priority over other shareholders during bankruptcy.

Yet, the decline in bond markets cannot be explained by the changes in creditor rights. Bond markets declined before major changes in the bankruptcy law were passed in 1945. The importance of the stock of bonds relative to GDP declined after 1914. Thus, the decline in bond markets has to do more with the decline in international capital flows and with the disruption of trade after WWI than with changes in creditor rights.

Now, once the decline in bond markets took place, the 1945 bankruptcy law served to reinforce the demise of bonds. The 1945 law prevailed until 2005, explaining why bond markets were relatively unattractive in Brazil. There were other factors altering the enforcement of bond and other debt contracts. Over time bankruptcy processes became a slow judicial process, which tended to last on average between 5 and 10 years. The delays and the high-inflation scenario after the 1940s lowered the real expected recovery rate for creditors to zero.¹³

It was only during the 1990s, when large amounts of foreign capital started to flow to Brazil (and other developing economies), that legislators and businessmen were concerned again with developing a financial system with strong creditor rights. A new bankruptcy law was just passed in Brazil's Congress in January of 2005.

The findings of this paper help us to understand the acceleration of economic growth in Brazil after 1890. In this country, rapid economic growth financed using the stock market began

¹³ Inflation correction for assets and liabilities of bankruptcy firms was forbidden by law until 1984. Interviews with Luis Fernando de Paiva and Giuliano Colombo, bankruptcy specialists from Pinheiro Neto Advogados, and Thomas Felsberg, of Felsberg & Associados, São Paulo, Brazil, November 11, 2005.

at the turn of the twentieth century. GDP per capita stayed flat during most of the nineteenth century. In contrast, the estimates of GDP show a compounded annual growth rate of 4% per year from 1890 to 1945. From 1900 to 1945 growth rates accelerated even more, and GDP reached a sustained growth rate of approximately 5%. There is scarce evidence that rapid growth was actually fueled by bank credit. Banks were not very active in providing long-term financing for companies. Most companies used equity and bonds to finance capital formation during the first half of the twentieth century. In fact, according to the estimates of stock and bond market capitalization for Rio de Janeiro, approximately a third of the funds to finance joint stock companies from 1890 to 1920 came from bond issues.¹⁴

The paper is organized in four sections. Section II explains the sources and methodologies used to construct the bond market and creditor rights data series. Section III presents the findings and develops the argument of the paper. Section IV concludes. The appendix explains the bankruptcy process in Brazil before 1945 and uses some cases to show how bankruptcy disputes were commonly solved.

Data

I built estimates of equity and bond market capitalization in Brazil from the Rio de Janeiro Stock Exchange annual summaries published in the *Relatorios da Câmara Sindical de Correiores de Fundos Públicos da Bolsa de Valores do Rio de Janeiro*, from 1905 to 1931 and 1944–1947. Additional capitalization data comes from the *Anuário da Bolsa de Valores do Rio de Janeiro*, 1932 to 1942. Bond and stock market capitalization data between 1886 and 1905 were constructed from the annual summaries published in the *Jornal do Comércio* and the *Retrospecto Comercial do Jornal do Comércio*, the most important financial newspaper of Rio de Janeiro during this period. Information for São Paulo is also added to the total estimations of stock market capitalization when available (without double counting cross-listings). Most of the São Paulo information was taken from Hanley, “Business Finance,” and from the *Anuário da Bolsa de Valores de São Paulo*, 1932–1950. Bond data for São Paulo was not added to my

¹⁴ For estimates for GDP growth in the nineteenth century see Leff, “*Economic Structure*.” Data after 1890 from Goldsmith, “*Brasil*.” For the link between financial markets and growth see Triner, *Banks*; Hanley, “Capital Markets” and “Business Finance;” and Haber, “Efficiency.”

estimates because an annual time series was almost impossible to build, but the omission biases the bond data against what I am arguing (that bond markets were large before 1930).

Data for stock market capitalization and total stock of debentures after 1990 come from *The Brazil Handbook*, 1992–2002 and the Brazilian Debenture Service. I normalize stock market and debenture stock data using the GDP estimates of Claudio Haddad and Claudio Contador, compiled by Goldsmith, *Brasil* (Tables 3.1 and 4.2), and current data compiled by IPEA.¹⁵

To compile a long time series of the type of protections for creditors included in bankruptcy laws I read and codified the bankruptcy laws of Brazil between 1850 and 2005. These included the Commerce Code of 1850; the Joint Stock Company Laws of 1882, 1890, and 1891; and the Bankruptcy Laws of 1902, 1908, 1929, 1945, and 2005.

To create indices of creditor rights that are comparable across time and countries (when possible), I follow the methodology of La Porta et al. (1998). According to La Porta et al., the more countries have any of the following rights in their bankruptcy laws, the more we would expect them to have larger debt markets: 1) secured creditors have the right to repossess their collateral in case of default (there is no automatic stay on assets for the debtor), 2) priority dictates that secured creditors are paid first (i.e., collateralized creditors are paid first), 3) approval of creditors is necessary for reorganization of the firm or when rescheduling the service of the firm's debts, and 4) original managers do not stay during the reorganization of the firm (i.e., trustees elected by the court or creditors run the company after the court declares the company bankrupt, i.e., there is no debtor-in-possession reorganization).

Following the methodology of La Porta et al., "Law and Finance," I add how many of these rights are present in each of the bankruptcy laws of Brazil. I also reproduce this methodology for a sample of countries circa 1910. The sum of these rights is used to create a creditor rights index. Using this index I can track some basic changes in bankruptcy law over time, and I can compare my results with the results for the 49 countries they surveyed in 1995.

The categorization of La Porta et al. gives high scores to countries with bankruptcy systems that strongly protect creditors. Today, there is an open debate as to whether it is better to have a bankruptcy law that is tough on debtors or a bankruptcy law focused on their

¹⁵ For companies that cross-listed their shares in São Paulo and Rio, I did not double count equity and bond market capitalization. For macro data and GDP price deflator see www.ipeadata.gov.br. For current bond stock and turnover rates see www.debenture.com.br.

rehabilitation. One may argue that a bankruptcy system that favors the continuation of the going concern, with debtors participating in the reorganization of the firm, would provide incentives for entrepreneurship and more risk taking.

The La Porta et al. index of creditor protections assumes that bankruptcy laws that allow managers to stay during reorganizations reward mismanagement. The logic is that a manager who made bad decisions or incurred risky activities for the firm would be rewarded with more time to try to undo his actions, against the interests and at the expense of creditors. This would provide less incentive for investors to buy corporate bonds and for banks to lend large amounts of money to companies.

In terms of priority, many countries have worker compensation and unpaid taxes as credits with higher priority than bonds or any secured debts. When a country's legislation does not give secured creditors (among them bondholders) priority, it may be harder for companies to get funds, because investors will expect a high premium to compensate for the uncertainty they will face in case of bankruptcy. If this premium is too high, companies will prefer not to borrow issuing bonds.

Findings

The Long-Run Trajectory of Bond Markets, 1886–2003

Figure 1 shows the long term-trend in stock market capitalization across legal families. This figure shows the average variation in stock market size relative to GDP by legal family using the 23-country sample of Rajan and Zingales in "Great Reversals." Both the French and the German civil law countries had on average larger financial markets than their common law counterparts during the first quarter of the twentieth century. Then the great reversal hit civil law countries, and we see a radical decline in stock market size until equity markets began to grow again around 1980. Brazil follows the general trend we find in Figure 1, with some minor blips in stock market activity in the 1970s.

[Figure 1]

Figure 2 shows the size of the equity and bond market capitalization relative to GDP in Brazil between 1885 and 2002. Bond and equity markets in Brazil roughly follow the same long-run trend Rajan and Zingales found for equity in other countries. The period of intense bond

activity starts in 1890 and lasts until 1920. From 1920 on there is a continuous decline in bond market size.

[Figure 2]

It was not only the stock of bonds that peaked between 1890 and 1920; in fact, the amount of bonds issued per year follows the same trend. Figure 3 shows the issues of bonds per year, and it is clear that most bond issues took place between 1898 and 1915. Most of the bonds issued during the golden era of bond markets in Brazil were denominated in sterling, francs, and other European currencies. Not coincidentally, this was also the period when Brazil adopted the gold standard to contain the appreciation of the local currency, the mil reis. With coffee exports booming because of the coffee valorization program and large capital inflows, both coffee exporters and the federal government agreed to regulate gold inflows and outflows through the Treasury's new currency board.

The volume of debenture trading in Rio de Janeiro shows a starker picture of bond market activity. Most of the boom in trading took place in Brazil between the 1890s and 1910. According to Figure 4, which shows the volume of corporate bonds traded in Brazil (as a percentage of GDP) between 1894 and 1958, there was a decline in trading even before WWI started. However, these figures have to be interpreted carefully given that in the early part of the twentieth century most of the trading for foreign currency-denominated bonds was done in London, Belgium, and Paris. Also, in the 1990s, the figures for debenture trading include bonds issues by banks and other lending institutions.

There were two legal changes that started the boom in the debenture market after 1890. First, there was a reform to the basic protections for creditors, an idea that I develop further in the next section. Beginning in 1890 debenture holders got first priority in case of bankruptcy, which changed their status during bankruptcy from unsecured creditors to privileged creditors. Second, the incentives for companies to issue debt versus equity were drastically changed in this year, too. Railroad and port companies were allowed to issue debentures for more than the declared value of their equity, and the rest of the chartered corporations could issue debentures up to the total book value of their equity. This was a strong incentive to issue debentures because it facilitated the initial collection of funds to start operations or to expand a plant or railroad.¹⁶

¹⁶ Companies could operate with only 20% of the face value of their shares fully paid if they were established before 1890, or 40% if the company was established after 1890. Then, even if only 20% or 40% of

The combined effects of these regulatory changes can be seen in Figures 2 to 4, which show the enormous growth of the debenture market between 1890 and 1914, a period of exchange rate stability and high coffee prices.¹⁷

[Figure 4]

There is an important difference in the long-run trajectory of the bond market and that of equity markets: the size of the bond markets does not return to its 1913 levels in the 1990s. Table 1 shows the equity market capitalization and the stock of debentures as a percentage of GDP from 1994 to 2003. We can see that while there was a sharp take-off in equity markets in the 1990s, the stock of bonds did not grow as fast. From Figure 2 we know that the stock of bonds in the first two decades of the twentieth century oscillated between 6% and 12% of GDP. These levels look large when compared with the levels of the 1990s, when the stock of bonds in Brazil represented between 2.5% and 3.5% of GDP.¹⁸

The rise of inflation after the Great Depression complicated any future bond market recovery. Sustained inflation became a problem in the 1930s, reaching annual levels of over 80% by the early 1960s. Even with the introduction of indexed debentures in the late 1960s, the debenture market has not been used as intensively by Brazilian companies as it was in 1913.

Creditor Rights, 1850–2001

Because bond markets thrived before WWI, according to the law and finance literature we would expect to find an institutional framework that protected creditors strongly during that period. Table 1 shows the index of creditor protections for Brazil between 1850 and 1945. The Commercial Code of 1850 set a bankruptcy procedure that was very protective of creditors. Out

equity was fully paid, the corporation could issue bonds for up to 100% of the registered value of the company, thus being able to raise 1.4 times the book value of capital (100% in debentures and 40% in equity) in little time and with little investment from the shareholders. Moreover, the privilege of issuing more bonds than equity was extended to companies with government concessions and those focused on public services in 1891.

¹⁷ Coffee was Brazil's main export and the main source of foreign exchange. In 1906, after a period of extreme uncertainty in coffee prices and exchange rates, coffee growers, supported by the government of Sao Paulo decided to create a price stabilization mechanism that would monitor and enforce production quotas and strict stockpiling of the excess supply of coffee according to what the international market was demanding. The program was very successful in increasing prices and stabilizing the exchange until the beginning of World War I. After the war was over the program had mixed results. According to Furtado, *Formação Econômica*, the coffee purchase program of the 1930s is what allowed Brazil to get out of the Great Depression by 1931.

¹⁸ Debentures declined drastically throughout the twentieth century. The main reason is that inflation increased rapidly after 1930 and indexed debenture issues were not introduced until the last decades of the century. For an analysis of the debenture market after 1930 see Santos (1973).

of the four provisions that La Porta et al. (1998) consider important for the development of debt markets, four of them were in this legislation. Bond issues were not explicitly allowed by law until 1882, and bondholders did not get recognized properly as secured creditors with first priority until 1890. Then, first priority for bondholders and secured creditors was modified in the 1908 law. The 1908 Bankruptcy Law placed unpaid taxes as a higher-priority credit. However, according to the evidence found in court cases, bondholders and secured creditors kept their first priority in court rulings during the decade 1910–1920.¹⁹

[Table 1]

In sum, there is evidence to sustain the first part of the law and finance claim. Bond markets thrived in Brazil when creditor rights were strong (and enforced by the courts). The level of bond market capitalization declined rapidly with the disruption of trade and capital flows during WWI and it has not recovered since.

Legal origin vs. the political economy of creditor rights

If creditor rights in Brazil had such large variation over time, one wonders how much weight we can attribute to legal origin as the explanatory variable. In fact, we could do a counterfactual exercise to think about what the results of the previous section would imply. First, let's assume all the countries surveyed by the law and finance literature in the 1990s held their creditor rights constant over time. How would the different levels of protection in Brazil compare with creditor protections in these countries? Second, what evidence would help us to figure out if Brazil is an outlier or if other countries actually follow the same path?

[TABLE 2]

Table 2 shows how the different levels of creditor protections Brazil has had since 1850 would compare to the level of creditor protections in a cross-section of countries in 1995. If we could transplant Brazil's creditor protections before 1908 to 1995, Brazil would be ranked next to the top creditor protectors in the world—England, Hong Kong, Malaysia, and Israel. Brazil

¹⁹ For a summary of creditor right enforcement before 1920 see, for example, Musacchio, “Order (na corte).” In 1914, Decree 10,902 tried to change the incentives of the Treasury to monitor court cases closely and get unpaid taxes paid first. Firms with unpaid taxes could be prosecuted federally by the Treasury. But this did not happen in practice. See the declarations of the president of the Center for Commerce and Industry of Rio de Janeiro (*Centro do Commercio e Indústria do Rio de Janeiro*) in *Retrospecto do Jornal do Commercio*, Rio de Janeiro, 1916, pp. 267–268.

with the legal protections between 1945 and 2005 would rank at the bottom of the distribution, and after the 2005 law it would move to the middle of the ranking.

In sum, this table shows that the variation in creditor rights that I find for Brazil is too great to support the legal origin hypothesis. If other French civil law countries present similar levels of variation, then using legal tradition as an exogenous variable that explains differences in investor protections would lose logical and statistical significance. Also, we need to consider that there is also variation in the level of creditor protections in civil law countries.²⁰

[TABLE 3]

Table 3 shows the level of creditor rights in a cross-section of four common law countries and five French civil law countries circa 1910. At first glance we can tell that Brazil is not an outlier; most French civil law countries have strong creditor rights in 1910. Moreover, comparing Table 2 and 3, we can tell that France, Spain, Belgium, Argentina, and Brazil had stronger creditor rights in 1910 than in 1995.

Table 3 also makes an important point regarding the variation of creditor rights in common law countries. Most common law countries, except the U.K., had weak protections for creditors in their bankruptcy laws. If we compare Table 2 and 3, we can see significant variation from 1910 to 1995. Hong Kong, Malaysia, and Singapore (the latter two countries were part of the former Strait Settlements) move from poor protections circa 1910 to the strongest protections for creditors in 1995. This reinforces the idea that there seems to be little path-dependence of legal origin to cause specific levels of creditor protections. It does not seem as though the mean differences across legal families would actually hold the same type of relationship that La Porta et al. found in 1995.

The Political Economy of Bankruptcy Legislation

The variance in creditor rights over a century and a half makes us wonder about the political factors behind the changes in legislation and enforcement patterns. In fact, the case of Brazil is a good example to illustrate how creditor rights included in bankruptcy laws and the commerce code are a product of the interaction of interest groups and law-makers and how changes in creditor protections actually had important effects on the bond market. The evidence

²⁰ For the historical variation in bankruptcy laws in the United States see Berglöf and Rosenthal, “The Political Economy.”

shows that bankruptcy laws were usually drafted by Congress in close consultation with business associations until 1945. The 1945 bankruptcy law was passed by the authoritarian regime of Vargas without any congressional approval and was aimed at protecting labor in case of company insolvency.

Brazil in fact had a tradition of strong creditor rights that traces back to Europe. After independence (1821), Brazil adopted the Napoleonic Commerce Code of 1807, which was commonly used in practice during the last years of the colony. The bankruptcy provisions were exclusive to merchants and were strict with debtors. The Napoleonic Code was strict with debtors in default, considering them criminals. The 1824 Constitution established a monarchy, with a parliamentary government in which the emperor was in charge of naming all of the ministries. Congress was in charge of drafting laws to regulate all economic activity in the country. Congress was divided into a senate and lower house. Both houses were elected through indirect vote (until 1881), whereby voters would choose electors. Electors would then participate in state electoral colleges to choose legislators. There was an income requirement to vote that very few Brazilians could pass.²¹

In 1850, the minister of justice, Eusébio de Queiroz, put together a commission in charge of drafting the first Brazilian Commerce Code. Queiroz invited to this commission a group of congressmen specializing in commercial legislation and the Viscount of Mauá, Brazil's most prolific businessman of the nineteenth century.²²

The Commerce Code included a section on bankruptcy legislation. As Table 1 shows, the Commerce Code protected secured creditors strongly. It allowed creditors to collect collateral at the time of default and gave them control during bankruptcy. During most of the nineteenth century, debt repudiation by businesses and individuals was considered a crime, punished many times with jail sentences.

Brazil started off with strong creditor protections, but bond markets took longer to develop. A large corporate bond market emerged only after Congress decided to include regulation for bond issuing in the Joint Stock Company Law of 1882. During the 1880s bond

²¹ All male Brazilians over 21 years old were eligible to vote if they had an income of 100\$000 (one hundred mil reis) or more (the income requirement was doubled in 1846). Electors and congressmen had to have an income of over 200\$000 (400\$000 after 1846). See Nicolau, *Historia*, pp. 10–12.

²² Mauá built the first railroad from the interior to the coast, owned several banking houses, and developed infrastructure and utility projects in Rio de Janeiro and the Amazon. See, for example, Maua, *Autobiografia*.

issues increased rapidly, but they still represented only a small fraction of total financing for firms (less than 5% of GDP in Figure 2). This is probably because bondholders were considered unsecured creditors (creditors without privilege) by the 1882 law.

Between 1889 and 1930 Brazil became a federalist republic with contested elections at all levels of government. In 1889, a republican movement overthrew the monarchy in a pacific campaign. Very rapidly a federalist republic was established, and two years later a new constitution was drafted. The 1891 Constitution included direct elections for the president, the vice-president, and Congress. Voting requirements were changed in the constitution, too. The income requirement was eliminated, and instead a new literacy requirement was added. The new political system increased the competition to get government positions and simultaneously facilitated the control of voters by local political leaders and commercial associations because voters had to sign their ballots. Political parties and politicians had to pay close attention to interest groups that could get them a large number of votes. Commercial associations were a natural target for politicians because they had a strong political voice and they had a large base of literate males who could vote. Moreover, powerful businessmen and business associations could finance political campaigns and political parties.²³

From the outset the republican government catered joint stock company laws to the interests of businessmen. For instance, the first reform to this law, in January of 1890, included provisions to give bondholders first priority in case of bankruptcy. This provided the initial incentive for investors to participate more actively in bond markets. Other laws described in previous sections facilitated entry to new businesses and gave companies extra incentives to issue bonds. After these reforms, the bond market expanded rapidly, reaching levels between 5% and 18% of GDP between 1890 and 1920.

Bankruptcy laws during the republican period were drafted in close consultation with business associations. The 1902 law and its procedural regulations passed in 1903 were circulated among “justice tribunals, Brazil’s Bar Association, the law schools, the commercial associations of the largest cities, and a great number of legal specialists.”²⁴ The 1929 law was drafted by the lawyer of the Commercial Association of São Paulo, at the request of Congress.²⁵

²³ For the history of elections and voting rights in Brazil, see Nicolau, *Historia*.

²⁴ “A novíssima lei de fallencias” in *São Paulo Judiciário*, October 2003, p. 157.

²⁵ The congressional commission in charge of drafting a new bankruptcy law in 1928 asked the Commercial Association of São Paulo and the Stock Brokers Associations of Rio de Janeiro and São Paulo to

In contrast, the bankruptcy law reform of 1945 was not drafted in consultation with business associations, and it radically altered the protections of creditors. Getúlio Vargas secured the presidency of Brazil in 1930 after a short civil war. He installed a provisional government in that year, dismissed Congress, and installed a parallel judiciary system to judge political cases. After a short counterrevolutionary movement promoted by the republican political forces of São Paulo in 1932, the provisional government of Vargas tried to create a new social pact by calling a new constitutional congress. A new constitution was drafted, and Vargas was elected president in 1934. Even though the constitution and the electoral law of 1932 had improved the secrecy of the ballot and had created an Electoral Tribunal, the improved democratic system did not last long. In 1937, Vargas declared a state of emergency and the suspension of powers after fooling everyone into believing there was a revolutionary threat. As a consequence, an authoritarian regime was established. Congress was dismissed, and Vargas began building a new corporatist state.

Labor was one of Vargas's main constituencies. He drew his main basis of support from the labor unions that he artificially created during his first years in the presidency. Since the early 1930s his government had promoted labor legislation that introduced basic protections for workers such as a minimum wage, paid vacations, and pension funds for workers.²⁶ An effort to consolidate all the labor laws started in 1943 with a piece of legislation known as the Consolidation of Labor Laws, or *Consolidação das Leis do Trabalho* (CLT). Most of the changes in labor laws were promoted by the Ministry of Labor under Minister Alexandre Marcondes Filho. Vargas also appointed him as minister of Justice. From those two ministries Marcondes Filho was in charge of passing the legal reforms that would make the CLT work, including a new bankruptcy law. In 1945, Marcondes Filho selected a committee of lawyers

propose a new bankruptcy law. The Commercial Association of São Paulo proposed only minor edits to the law, acknowledging itself to be satisfied with the state of bankruptcy law in the country. See Lima, *Nova lei*, pp. 11–12.

²⁶ Some labor protections were included in the 1934 constitution. In 1937, Vargas drafted a new constitution basically respecting labor rights included in 1934. He passed legislation on specific labor protections after that. In 1938, the government established a minimum wage. In 1939, a law reformed unions. According to this law, all unions were transformed into state and national unions by profession. In 1940, the government made union contributions mandatory. Finally, in 1941, the *Justiça do Trabalho*, Justice of Labor, was regulated. This law introduced an arbitration panel to solve all labor disputes. The CLT was a law compiling previous legislation of labor rights. For more information, see CLT in Decree-Law 5,452 of May 1, 1943.

loyal to Vargas to draft the new bankruptcy law. This law was then passed as a presidential decree-law, without any congressional approval.²⁷

The main objective of the 1945 bankruptcy law was to promote the survival of the going concern. In this law, debtors could avoid liquidation by filing for a reorganization scheme called *concordata preventiva*, which gave debtors two years to reorganize the company and pay all of the debts. It did not always need creditor approval and allowed the management of corporations to continue with the operation of the company under bankruptcy protection. Finally, credits owed in the form of social security payments and labor injury compensations took first priority over any other creditors in the bankruptcy process. After 1945, secured creditors were third in line, after labor and the Treasury.

Part of the reason investors did not complain about the demise of creditor rights in the 1940s was that preferred shares had substituted debentures as the most-liked fixed-income securities. Preferred shares were introduced in 1932. They were a good substitute for bonds because they offered investors a minimum fixed dividend (plus a fluctuating amount depending on profits), first priority among shareholders to recover their capital in case of bankruptcy, and lower deterioration in value when inflation was high. Once the priority of bondholders during bankruptcy was fully eliminated, there were very few advantages of debentures over preferred shares.

A new bankruptcy law was approved in early 2005. The negotiations to provide more protections to creditors had taken more than 10 years. Congressmen from leftist parties tried to protect the status of labor in the bankruptcy process, and the National Treasury did not want to lose its priority over secured creditors. At the end, an agreement among congressmen limited the maximum amount labor could claim as privileged credits and gave secured creditors priority over debts to the Treasury.

Conclusions

The findings of this paper have important implications for the literature that has focused on the relationship between early institutions, such as legal origin, and financial development. First, there seems to be a strong relationship between creditor protections and bond market

²⁷ Information on Alexandre Marcondes Filho comes from Fundação Getúlio Vargas, CPDOC, "A Era Vargas - 1º tempo - dos anos 20 a 1945," available at http://www.cpdoc.fgv.br/nav_historia/htm/ev_apresentacao.htm

development, both in the cross-sectional data for the 1990s and in the time series for the case of Brazil. Therefore, the paper provides a time-series test showing that the protection of investors is related to the development of financial markets. Second, legal origin seems to explain little about the variation in outcomes and legal protections over time. Other variables, such as the variation in trade and international capital flows, seem to better explain the decline of bond markets. The reduction in creditor rights did not come before the decline of bond markets. Creditor rights were eliminated in Brazil after the Great Depression, once the relative bargaining power of labor pushed the government for strong labor protections.

I have also shown that Brazil is not an outlier in terms of the enormous variation in creditor rights over time. Most French civil law countries had strong creditor rights circa 1910 and ended up with poor protections in the 1990s. In contrast, some common law countries such as Hong Kong and Singapore (Strait Settlements) had weak creditor rights when they were still British colonies and ended up with strong creditor rights in 1995. Thus, there is little evidence to support the idea that investor protections, in this case creditor rights, are really a consequence of the legal tradition countries follow.

Finally, the paper suggests that the institutional framework that prevailed before 1930 might have been beneficial for the initial takeoff of Brazilian industrialization. In fact, the financing of early industrialization using equity and bond markets might have fueled the initial acceleration of industrial output growth. However, these findings do not imply that strong creditor rights and large bond markets are necessary conditions for rapid growth. Brazil actually achieved sustained rates of growth surpassing 9% per year after World War II, when the government took a more active role in the financing of businesses. A comparison of the effects of the financing patterns in the post-WWII and the pre-1930 periods is beyond the scope of this paper and leaves open interesting questions for further research.

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Figures and Tables

Table 1. Creditor Rights in Brazil since 1850

Law or Decree:	C. Code of 1850	L. 3150, 12/04/1882	D. 917, 01/17/ 1890	D. 603, 1891	L. 859, 8/16/1902	Lei 2024, 1908	D. 5746, 9/12/1929	Dec.-Law 7661, 6/21/1945	1995	Law 11, 101, 2/92005
1. Secured creditors can repossess collateral (no automatic stay)	1	1	1	1 ^a	1	1	1	0	0	1
2. Secured creditors have first priority	1	1	1	1	1	0	0	0	0	0
Bondholders have first priority ^b	0	0	1	1	1	0	0	0	0	0
3. Approval of creditors for reorganization	1	1	1	1	1	1	1	1	1	1
4. Management does not automatically stay for reorganization	1	1	1	1	1	1	1	0	0	0
Index	4	4	4	4	4	3	3	1	1	2

Source: Brazil, *Coleção das Leis*. For 1945 Decree Law 7661 see Bevilaqua, *Falência*. Data for 1995 from La Porta et al., “Law and Finance.” For 2005 Law (Law 11,101 2/9/2005) see <https://www.planalto.gov.br>.

Notes: (a) Even though this right was not explicit in the decree, the previous law continued to rule. (b) Debenture holders did not have first priority in the 1850 Commercial Code. After 1908 they just stopped having first priority because unpaid salaries and taxes were moved to the front of the list; among private creditors, they were still first.

Table 2. Variation in Creditor Rights in Brazil since 1850 vs. the World in 1995

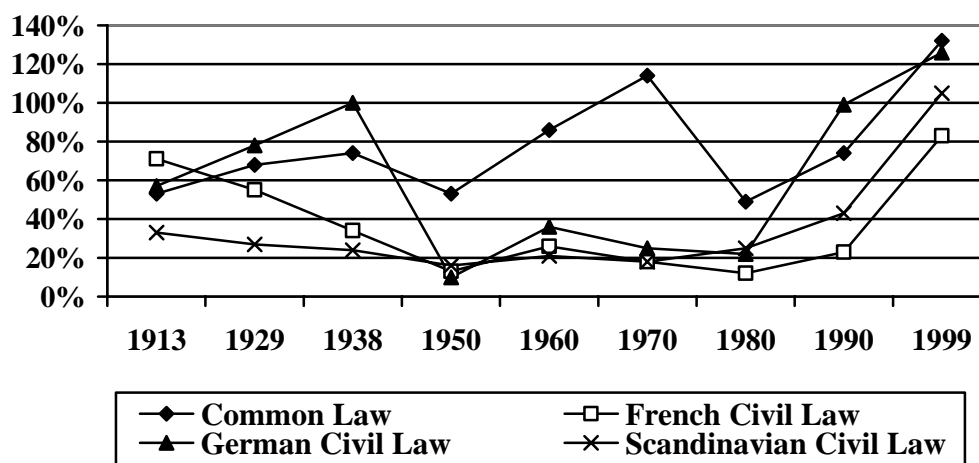
Country	No Automatic Stay	Priority	Approval for reorganization	Management is replaced	Index
England, Hong Kong, Malaysia, Singapore, Israel, and Brazil 1890–1908	1	1	1	1	4
Brazil 1850–1890; 1908–1945 , New Zealand, Thailand	1	0	1	1	3
Germany and Denmark	1	1	1	0	3
Japan and Uruguay	0	1	0	1	2
Chile, Italy and the Netherlands	0	1	1	0	2
Taiwan, Belgium and Spain	1	1	0	0	2
Brazil since June 2005	1	0	1	0	2
Brazil 1945-2005	0	0	1	0	1
Argentina, Switzerland, and Finland	0	1	0	0	1
Australia, Canada, Ireland, and U.S.A.	0	1	0	0	1
France and Mexico	0	0	0	0	0

Source: Table 1 and La Porta et al., “Law and Finance,” Table 4.

Table 3. Creditor Rights in Selected Countries c. 1910

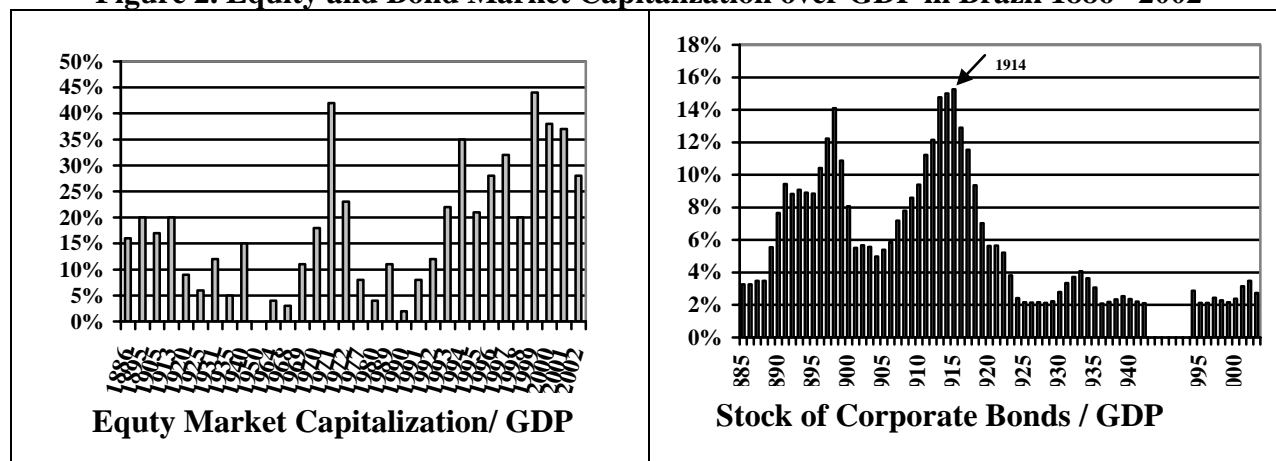
	Common law				French civil law				
	United Kingdom	United States	Hong Kong	Strait Settlements	France	Belgium	Spain	Argentina	Brazil
1. Secured creditors can repossess collateral (no automatic stay)	1	0	0	0	1	1	0	1	1
2. Secured creditors have first priority	1	1	1	1	1	1	1	1	1
3. Approval of creditors for reorganization	1	1	1	1	1	1	1	1	1
4. Management does not stay for reorganization	1	0	0	0	0	0	0	0	1
Index	4	2	2	2	3	3	3	1	1

Sources by country: United Kingdom, *Companies (Consolidation) Act 1908*; United States from Huberich, *Commercial Laws*, Hong Kong, *Bankruptcy Ordinance No. 7 1891*; Strait Settlements, *An Ordinance to Amend the Law of Bankruptcy no 2 1888* (3d December 1888); France from G. Horn, *Commercial Law*; Belgium, from Hennebicq, *Commercial* (based on the Commercial Code of 1872 as amended to 1910); Spain from Benito, *Commercial*; Argentina from Quesada, *Commercial*; Brazil, *Lei 2024, December 17, 1908*, in Brazil, *Coleção das Leis*.

Figure 1. Equity Market Capitalization in 23 Countries by Legal Family, 1913-1999

Source: Rajan and Zingales, "Great Reversals," Table 3. Countries included by legal family are Australia, Canada, India, South Africa, the UK, and the US for Common Law; Austria, Germany, Japan, and Switzerland for German Civil Law; Argentina, Belgium, Brazil, Chile, Cuba, Egypt, France, Italy, Netherlands, and Spain for French Civil Law; and, Denmark, Norway, and Sweden for Scandinavian Civil Law.

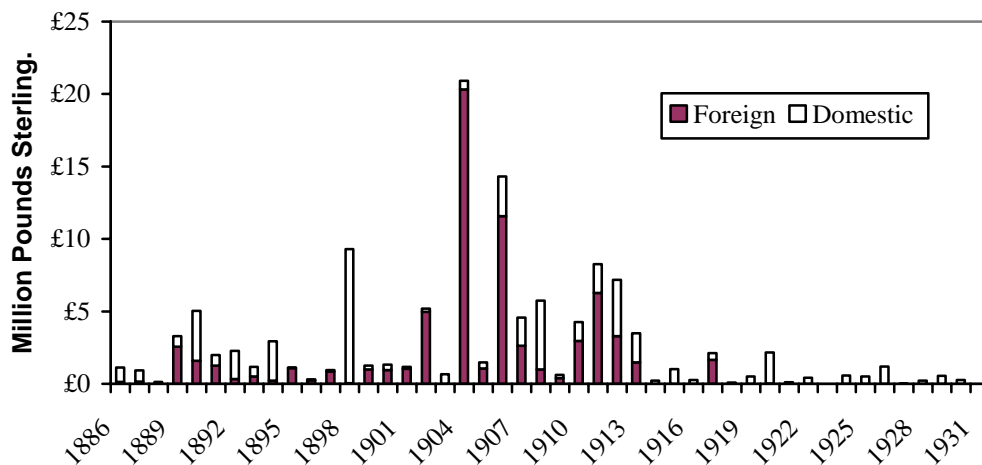
Figure 2. Equity and Bond Market Capitalization over GDP in Brazil 1886 –2002



Source: Author's estimates, see text.

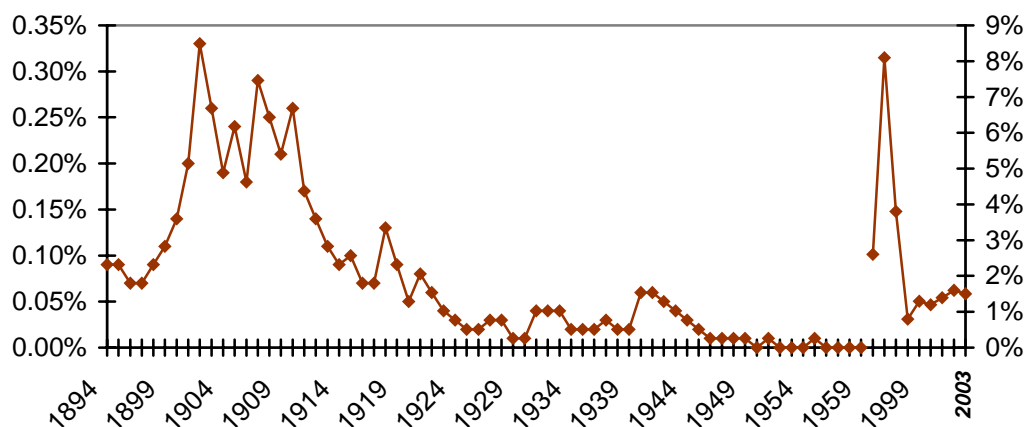
Notes: Sao Paulo Stock Exchange data missing for 1920, 1925, and 1935. Data for 1947 –1964 excluded because legislation forced all joint stock companies to register at the stock exchange, thus creating data not comparable to other periods and with other countries.

Figure 3. Corporate bond issues per year, Rio de Janeiro Stock Exchange, 1890-1930



Source: See figure 2

Figure 4. Value of Corporate Bonds Traded as a % of GDP, 1894-1959



Source: Bond turnover rates before 1960 from Levy, *Bolsa*, Tables 23, 26, 35, 41, 43, 44, 58, 61, and 62. Data for the years 1934, 1935, and 1939 were corrected by the author using the reports of the stock brokers association and the *Anuario da Bolsa de Valores do Rio de Janeiro*. GDP measures from Goldsmith, *Brasil*, Tables III-1, IV-2, and VI-2. Data from 1994 to 2003 from Brazil's National Debenture Service: www.debenture.com.br, normalized using GDP from Ipea, Brazil: www.ipeadata.gov.br.