A SURPRISING DEVELOPMENT: BANK LENDING AND PROFITABILITY IN SÃO PAULO, 1884-1920

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Alexander Gerschenkron in his seminal work *Economic Backwardness in Historical Perspective* argued that perhaps the most important ingredient in "catching up" to early industrializing economies was the availability of long term capital for investment. Only England, for being the first industrial nation, had the luxury of industrializing in an environment virtually free from external competition. It therefore had the equally luxurious ability to finance its modern sector through the slow process of retaining profits. All other nations, by virtue of having to catch up, needed more capital more quickly. The structure of an economy's financial sector, therefore, was an important factor in determining its ability to mount a challenge to the leading industrial nations. This was as much the case for nineteenth-century France, Germany and Russia, the subjects of Gerschenkron's observations, as it was for the Latin American nations. The greater the lag, the more critical it was to possess or create a financial sector capable of bridging the gap between savers and borrowers. Where such a sector did not exist, Gershenkron warned, the state would do well to intervene to assure a supply of capital to be invested at the long term. By making long-term credit available for infrastructure and industrial development, the state could overcome what he termed "the tension between the actual state of economic activities in the country and the existing obstacles to industrial development, on the one hand, and the great promise inherent in such a development, on the other."[1]

Brazilian statesmen certainly felt that tension in the nineteenth century. Beginning with the Commercial Code of 1850, the Imperial government cautiously passed a number of bills aimed at regulating the business world as the Brazilian economy inched toward industrial and commercial development. Alternating between incentive and disincentive for the next 40 years, the government's legislation is better know for its caution than for its innovation. It might, for example, pass a law allowing for the creation of joint-stock companies, only to include provisions saddling these companies with such extraordinary impediments that attracting investors would be impossible.[2] Given its own ambivalence about new business formation, it is not surprising that the Imperial government did not promote the sorts of credit institutions that would provide investment credit to such businesses. For most of the nineteenth century, banks by law were strictly limited to commercial practices. That is, they lent money at the short term because this is what the principle economic sector, export agriculture, most needed. Banks that lent money at the long term, such as mortgage banks, were conspicuous for their absence in an era of rapid agricultural expansion and early industrial development in the center-south. In spite of the fairly rapid pace of change in the Brazilian economy, credit institutions were few in number and limited in the scope of their activities.[3]

Beginning in the 1880s, both state and national governments took heed of the tension between the diversification of the economy and the limitations of the financial sector and began to act. In 1882 the state of São Paulo backed a new mortgage bank formed to provide long-term credit to coffee planters. In 1888 the Imperial government amended its banking laws to increase the amount of money circulating in the economy in part to provide relief to cash-strapped planters. And, in 1890 Brazil's pro-business finance minister, Rui Barbosa, cleared away the final Imperial institutional barriers that had limited the formation of investment banks in order to promote industrial and infrastructure development.[4] The Brazilian state after 1889, it appeared, recognized the need for long-term credit just as Gershenkron would later prescribe in his assessment of late development and had stepped in to promote the credit institutions so critical to investment and modernization.

In spite of this astute observation of the need for long term lending in the expanding urban-industrial economy, the regulatory changes had almost no impact on the financial sector. Three São Paulo banks took up the call to form investment banks but then studiously avoided long term lending. One remained almost entirely involved in commercial lending, a second abandoned banking altogether to become a textile company, and the third went bankrupt. By the turn of the 20th century, as São Paulo was poised for a rapid expansion in industrial investment, urban development, and commercial expansion, it lacked any financial institution capable of or interested in lending at the long term. The state of São Paulo in the 1910s tried once again to found an investment bank, this time by inviting in the French to pick up a ball no Brazilian banker seemed to want to touch. Clearly, state involvement in all these cases of bank formation and regulatory reform point out the governments' awareness of the shortage of long term investment capital and the need to do something about it. Just as clear, however, was the failure of each and every attempt.

What was the source of this failure? The now-legendary history of São Paulo's turn-of-the-century industrialization and urbanization suggests that long term capital must have been in demand. The explosion of the banking sector from just six banks to more than thirty banks (in addition to the formation of dozens of other types of joint-stock companies) in response to Rui Barbosa's regulatory reform suggests that there was plenty of surplus capital in the São Paulo coffee economy to support this new equity investment. Therefore capital must have been in supply. The institutional restrictions that had hampered long term lending during the Empire had not only been lifted by the Republican regime but had been replaced with incentives specifically rewarding the formation of investment banks. Therefore the problem could not have rested with the regulatory environment. New banks, as we will see, were rapidly formed on the heels of banks that failed. Therefore the problem did not seem to be risk aversion on the part of investors. In spite of all these factors, demand, supply and a favorable environment for institutional formation, and a willingness of investors to invest in commercial banks in spite of apparent risk, long term credit-lending investment banks failed to take root.

In this paper I argue that the answer to this perplexing question was a simple one--profits. The commercial banks that lent money at the short term were significantly more profitable than the investment banks that lent money at the long term. This profitability profile held up both in terms of profits at the individual bank level and returns to investors in these banks. Gershenkron thought that the state would be compensating for capital scarcity or risk aversion, but in the case of São Paulo the state apparently faced neither problem. The major adversary the investment banking institution faced in São Paulo was one that Gerschenkron did not address. That is this: investors wanted returns on their money and commercial banks generated impressive and even astronomical returns. As capital followed profits in São Paulo at the turn of the century, the expansion of the banking sector during the coffee boom and early industrialization took place almost exclusively through institutions providing short term commercial credit.

The Data and the Sample

This study covers the period from 1884 to 1920. The time span was chosen because it was during the coffee boom (roughly 1880-on in São Paulo) that the bank sector expanded and diversified, providing a strong institutional record to be analyzed. The time frame begins with the first expansion of banking when São Paulo's wealth was predominantly agricultural and takes us through the era when rapid industrialization and urbanization pushed the region toward its modern day position as Brazil's industrial leader.

The body of evidence used in this study is of two principal types. The first is semi-annual financial statements of publicly held banks. These financial statements include balance sheets and profit and loss statements filed with the Treasury Department of the Province of São Paulo from 1865 to 1889, and printed in local newspapers from 1890 to 1920.[5] These documents provided either actual earnings statements or statements bearing account information which allowed me to construct profit estimates. The second type of data includes stock prices for São Paulo's banking enterprises and price and dividend data on a number of government bonds traded through private brokerages and on the São Paulo Exchange.[6] These data were culled principally from business journals and local newspapers and provided the key elements for the calculation of external rates of return to investments in banking enterprises.[7]

The sample analyzed here includes six joint-stock São Paulo banks for the period from 1885 to 1889, fifteen joint-stock banks for the period 1890 to 1905, and four joint-stock banks for the period 1906-1920. The sample banks were selected entirely on the basis of available documentation.[8] The three major newspapers of the era, the *Correio Paulistano*, the *Diário Popular*, and the *Estado de São Paulo* were thoroughly searched for financial statements of all banks operating in São Paulo city and state. Any bank that yielded at least three semesters of statements was included in the sample. All six domestic joint-stock banks operating in the first period, fifteen of the twenty-eight domestic joint-stock banks operating in the second period, and four of the ten domestic joint-stock banks operating in the third period met this criterion.

The sample banks represent the lion's share of the domestic banking sector's total assets. As a general rule, those banks left out for lack of sufficient statements were significantly smaller than those included. For example, in the 1890-1906 period the largest banks left out of the sample were about the same size as the smallest banks; in the 1907-1920 period the sample includes just four of ten domestic joint-stock banks, but these banks contributed more than 90% of total domestic bank sector equity. The exclusion of the smaller banks from the sample certainly biases my sample in the direction of larger banks, but the overall sample includes banks of a broad array of sizes, from the small regional banks that never surpass two million mil-reis in assets to the largest banks worth upward of ninety million mil-reis in assets.[9]

My reliance on published financial statements to construct my sample produced two limitations. First, there are no privately owned banks in this study. For many years all joint-stock companies were chartered by the Brazilian government and, as a condition of their charter, were required to publish their financial statements. Private banks, however, were not chartered by the Brazilian government and therefore were not required to file or publish their financial statements.[10] Second, foreign banks could not be included in the sample. Foreign banks were chartered by the Brazilian government and were therefore required to publish their balance sheets, but were owned and traded on foreign stock exchanges and therefore provided only abbreviated statements to the São Paulo press. Key elements needed to assemble measures of profitability such as owners' equity, dividends and retained earnings were absent from the financial statements. In short, these balance sheets did not include the data needed for my analysis.

The absence of private banks from the sample does not appear to be important. Private banking houses had comprised at least half of the banking establishments in operation during the early decades of banking, but their importance had waned by the early 1880s. Publicly held banks dominated the sector thereafter.[11] The absence of foreign banks from the sample, however, is more significant. The foreign banks contributed almost 20% of the bank sector's assets in the 1880s, and contributed between 25% and 35% of the bank sector's assets in the period from 1890-1905. A serious crisis in the banking sector at the turn of the century left the domestic banks debilitated but left the foreign banks standing. In 1906, foreign and domestic equity in São Paulo's bank sector were roughly equal. By World War I, foreign capital grew to overshadow domestic capital by a factor of four to one. There is no way to compensate for the lack of useful information on the foreign banks' balance sheets. This study, however, investigates the question of why domestic financial institutional development followed a commercial path. Therefore, analysis of the profitability of publicly-held domestic banks is the appropriate test.

The Profitability of Banking: Methodology

I sought to measure the profitability of banking from two approaches: internally, as an enterprise, and externally, as an investment. My purpose was to produce complementary results that would fully capture the performance of individual banking institutions. Presumably, the profitable application of assets would translate into rewards for investors who had risked their capital. To measure the success of a bank as a business I calculated its return on equity. I gathered the balance sheets and profit and loss statements for every semester they were available. Each bank considered "earnings" to include certain accounts, which sometimes included taxes on dividends and directors' honoraria and other times included just dividends and retained earnings. In order to standardize my treatment of the sample banks, and to estimate income for banks that did not publish profit and loss statements, I applied a standard definition of earnings to all banks. This included declared dividends plus changes to reserve and undistributed profits accounts. In cases when I had non-consecutive financial statement and no profit and loss statements, I estimated earnings by assuming that the changes to the reserve funds and undistributed earnings accounts occurred evenly across time.[12]

To measure the attractiveness of a bank as an investment I calculated the returns paid to shareholders. Here I used dividend payments in a given year measured against the year end market value of the stock I performed the same calculation on four separate government bond issues through the period to see how bank stocks performed relative to a low-risk investment alternative and to assess the relative risk of investing capital in bank stocks. Finally, I calculated the total return investors earned in bank stocks. This measurement included dividend payments and appreciation in the price of the stock. I then performed the same calculation on the four bonds to evaluate the relative attractiveness of investing in these two types of instruments.

The Profitability of Banking: Return on Equity

The 1880s

The 1880s were a time of rapid growth in the São Paulo economy, thanks to booming international demand for coffee. São Paulo's share in total Brazilian coffee production expanded from just twenty-five percent in 1875 to sixty percent by 1890. The expansion of coffee production resulted in an expansion of economic activity in both port and capital cities, and in both import/export trade and urban commerce. One of the most striking results of this expansion was experienced by the banking sector. São Paulo had just two domestic banks prior to 1880, both dedicated to commercial banking practices. Five new joint-stock banks were formed during the coffee boom of the 1880s, four of which were commercial banks. This 1880s banking boom caused equity investment in commercial banking to grow from just under two million mil-reis to more than eleven million mil-reis.

The figures for the internal profitability of banking in the 1880s demonstrate the institutional expansion of the São Paulo banking sector was accompanied by solid profits. The growth of both foreign trade and urban commerce meant that the discounting and short term lending operations which dominated the commercial banking business during the 1880s were quite profitable. (Table 1) The semester returns demonstrated by the oldest and largest commercial bank in the sample, the Banco do Brasil, averaged almost 10% per semester during the decade, while the second oldest averaged 5% per semester. Three of the newest commercial banks also demonstrated steadily increasing rates of return in their first years of operation.[13]

In addition to an expanding commercial banking business, São Paulo banks first ventured into the business of long term credit in the 1880s. Although São Paulo's coffee sector began to expand in the 1860s and 1870s, the first mortgage bank was not founded until 1882. Even then the government had to offer guarantees to investors in order for the Banco de Crédito Real mortgage bank to be formed.[14] In spite of dire predictions concerning the riskiness of agricultural credit, the Banco de Crédito Real fared well in the 1880s. Loans to agriculture doubled from US$ 1.2 million to US$ 2.3 million in its first five years. The proportion of the bank's long term credit relative to total earning assets also grew.[15] In 1883 long term loans in the form of rural and urban mortgages comprised 69% of the bank's earning assets. By 1888 total mortgage loans had grown to 80% of earning assets. For its effort, the Banco de Crédito Real earned 5% on equity in 1884 and averaged 5.6% over the decade. A second, smaller commercial bank founded in 1887 also dabbled in mortgage lending and profited from it. The Banco da Lavoura dedicated about 25% of its earning assets to mortgage loans and earned an average semester return of 4.8%. (Table 1)

It is curious that long term credit was so late in coming and did not spread beyond the two banks, only one of which was a dedicated mortgage bank, in the decade when planting grew the fastest. There was considerable reluctance on the part of the financial community to venture into the rural mortgage business, which was traditionally regarded to be too risky. The curious aspect of this trepidation is that the bankers often had blood ties to the agricultural sector. In fact, members of the great planter families sat on bank boards and even were original investors in banking enterprises.[16] This paradoxical behavior may be explained by the lucrative nature of commercial banking which, as the above numbers show, turned a steady profit on short term credit mechanisms. The bulk of the boom was in the commerce generated by the coffee trade, and this commerce was more likely to create demand for commercial banks. There could not have been much incentive to take on the risk of agricultural loans when similar profits were available in the lower risk world of commercial banking.

1890-1905

The period from 1890 to the early twentieth century began with one of the most aggressive periods of business expansion in Brazilian history. This period, the Encilhamento, was the result of legislative changes that came on the heels of the 1889 political coup. The new republican government, politically centered in the economically booming Rio de Janeiro-São Paulo region, actively favored the expansion of domestic enterprise. In order to promote its new agenda, the government passed a series of business reforms in January of 1890 designed to boost new business formations.[17] Over two hundred joint-stock companies were founded in São Paulo in the first six months after the reforms, compared with thirty in late 1887.[18]

A central component of the new business legislation was the Banking Reform of 1890, the first serious attempt to address the lack of long term credit in the economy. The reform expanded the existing mortgage banking law, which authorized lending to the agricultural sector, to include a series of new business opportunities to any bank that applied for and won a government charter.[19] These banks were authorized to lend at the long term for the construction of buildings, railroads, docks, port improvements, communications, and any industrial activities.[20] Additionally, they were authorized to underwrite colonization programs, irrigation programs, canal building, agricultural and livestock activities, and mining exploration. In return, they were granted the rare privilege to issue money to finance their development programs.

In spite of the new business possibilities promoted in the banking reform bill, only two of the twenty-eight banks formed in the following years applied for this charter. The Banco de Santos and the Banco União de São Paulo were newly organized as investment banks under the new law. [21] A third bank, the existing Banco de Crédito Real, was extended this special charter because its profile met the specifications of the banking reform act. The Banco de Crédito Real, however, never engaged in urban lending.

The Banco de Santos and the Banco União de São Paulo did form separate portfolios containing assets dedicated to urban construction and industrial pursuits, but to dramatically different degrees. (Table 2) The construction/industrial portfolio was not of much importance to the Banco de Santos, comprising less than 1% of the bank's assets, but that of the Banco União de São Paulo was impressive. This bank invested several million dollars of earning assets in loans, buildings, factories and machinery. By 1904, the industrial portfolio grew to account for 68% of the bank's total assets. The Banco União de São Paulo's interest in industrial credit and management, however, was not matched by other institutions. In spite of a steady flow of new entrants to the sector, at no point did any other bank venture into the industrial credit business.

This lack of enthusiasm for long term lending may be explained by the low rate of return demonstrated by the investment banks, especially the largest and most diversified one of the three. The Banco União de São Paulo dedicated assets to commercial loans, rural mortgages, urban mortgages, and investment in urban industrial plant. Its return on equity averaged only 4.9% per semester in the first half of the 1890s, 3.0% in the second half of the decade, and posted losses in three of five periods for which I have data in the first years of the twentieth century. (Table 3) With the exception of an occasional good semester's returns, these profitability figures were lower than any commercial banking institution in operation during this entire period. The only banks the Banco União de São Paulo outperformed with any regularity were its fellow investment banks, the Banco de Crédito Real and the Banco de Santos.

The greatest growth in the banking sector after the 1890 banking reform law was clearly among commercial banking institutions. At least twenty-five of the twenty-eight domestic banks in operation between 1890 and 1905 were dedicated primarily to the commercial banking business. This appears to be explained by profits. If the profitability of banks in the 1880s showed mortgage and commercial banks performing equally well, the period from 1890 to 1905 showed a clear trend of higher profitability for commercial banks in São Paulo. (Table 3) Seven of eleven commercial banks always performed as well or better than the three investment banks in operation during the period, and ten of eleven commercial banks outperformed the Banco de Crédito Real mortgage bank in every period. Most commercial banks earned semester profits of 6% and above while the investment banks tended to earn half that. The one investment bank that most resembled a commercial bank, the Banco de Santos, also generally had the highest returns of the three investment banks in any given period. Certainly the commercial banking profit potential was higher than that of the investment banks.

Two clear trends that emerged were the consistently declining profits of the Banco União de São Paulo and the consistently low profitability of the Banco de Crédito Real. The Banco União was the only investment bank with any real investment in industrial pursuits. These industrial investments occupied an increasing proportion of the bank's assets over time. As industrial investments increased, profits decreased. This observation, coupled with the fact that no other banking institution in all of São Paulo lent long term credit to industry during this period, suggests that industrial lending was not a profitable business. Whereas the turnover of commercial transactions could generate a decent return for banks, industrial investments took a long time to bear fruit. These investments for the Banco União de São Paulo came during a regime change which brought in an intolerant finance minister, Joaquim Murtinho, who felt Brazil had no business industrializing. Policies hostile to the domestic economic development effort placed new urban industries under pressure and had to have dampened the profits of their bankers.

The tendency of commercial banks to attain a higher rate of profitability than the Banco de Crédito Real from 1890 to 1905 was likely due to the slowly deteriorating condition of the coffee market during the period, and explains the limited expansion of mortgage banking vis a vis commercial banking. Coffee planting had grown at a rapid pace in the 1880s and early 1890s, producing a coffee supply that was outstripping demand. Falling international prices were initially offset by a devaluation of the mil-reis, but after 1897 both external and internal coffee prices were in decline and coffee stocks were growing.[22] A crisis of overproduction had occurred that would culminate in government intervention to purchase excess coffee stocks and prop up the exchange rate in 1906 to protect Brazilian income from trade. This general crisis in the coffee sector is reflected in the profitability of all banks, which declined somewhat from the early years of the 1890s. Still, commercial banks remained more profitable than the mortgage banks, whose business of lending to the agricultural sector was under pressure by the end of the decade.

A new aspect of commercial banking in the 1890s was its expanded geographical distribution. Before 1890 no bank was headquartered outside one of the three main cities in the province: the capital city of São Paulo, the port city of Santos, and the interior city of Campinas which was the hub of the coffee growing region for most of the nineteenth century. With the general economic expansion of the 1890s, however, this changed. Of the 15 new banks founded in 1890 and 1891, two were headquartered in interior cities other than Campinas for the first time. These new regional banks and the cities where they were located, Jaú and Ribeirão Preto, represented the geographical expansion of coffee production. The spurt of regional banking continued in 1892 when at least four other regional banks were founded. This was the greatest representation of regional interests in the banking sector in all its early history.

Regional banking appears to have presented the greatest opportunities for financial entrepreneurs in the 1890s. All commercial banks tended to produce higher returns than mortgage banks, but among commercial banks, regional banks solidly outperformed banks in the three principal cities ("city banks"). This was most likely due to the physical distribution of banks. The city of São Paulo had at least eight domestic commercial banks operating at any given time, and an additional four foreign commercial banks, while each of the regional banks was the only major bank operating in its area.[23] This exclusivity, and the implicit absence of competition, may have allowed banks to operate at a wider interest margin than banks in large commercial centers such as Santos and São Paulo. The regional banks regularly outperformed the other commercial banks, earning average semester profits on the order of seven to twelve percent. (Table 3)

1905-1920

Bank returns do not tell us as much after the turn of the century as they did before. This is primarily because a sharp recessionary shock to the economy, intentionally induced by central government policies intended to curb liquidity and force a re-valuation of the domestic currency, all but destroyed the domestic banking sector. The recessionary policies were the harshest between 1898 and 1902. During this time several important banks failed. The Banco União de São Carlos failed in 1902 and the Banco Mercantil de Santos, one of the oldest banks in the state, was liquidated in 1904. The Banco dos Lavradores hung on until 1905 and Construtor e Agrícola lasted until 1907, but the recession had dealt a death blow. The Banco de Santos disappeared by the turn of the century, the Banco de Crédito Real entered into liquidation in 1906, and the Banco União de São Paulo gave up on banking and dedicated itself full time to its cotton textile business. The state was left with a reduced commercial banking sector and without any long-term lending facilities at all.

The turnaround in the bank sector came around 1909. The recession at the turn of the century had been part of a policy response to the crisis of overproduction in the coffee sector. Once the state of São Paulo decided to intervene, purchasing and holding stocks of coffee to reduce supply and bolster prices, the state's income was protected and a generalized economic boom followed that lasted until the first world war. The bank sector after 1905 consisted of between five and eight domestic joint-stock banks. About half the banks were large city banks and half were small regional banks.[24] The prominent feature of this market is that it didn't experience significant growth or change. The banks that operated in São Paulo were survivors from the 1890s or were founded during the recession at the turn of the century. The only new domestic bank to form was the Banco Comercial do Estado de São Paulo, founded in 1912.

This period is characterized by consistent, healthy profits for the few banks for which I have data. (Table 4) These banks returned profits between 4% and 6% per semester in the first decade of the century and between 3% and almost 8% during the second decade. One bank had some difficulty maintaining its profits during World War I. The Banco de São Paulo downsized and returned much smaller profits during the war (an average 1.9% between 1915-1918 compared to 4.1% in the five years before the war) but recovered its profitability after 1918 and increased its capitalization threefold. Another bank, the Banco do Comércio e Indústria de São Paulo (BCISP), was so successful throughout this period that it paid out huge nominal dividends of 16% to 20% per year and had plenty of cash left over to distribute ever increasing bonuses to its employees.

The only significant development in the post-1906 bank sector was the founding of a mortgage bank. The Banco de Crédito Hipotecário e Agrícola, founded in 1909, was big. At about twenty million mil-reis it was twice the size of the BCISP and the Banco de São Paulo. This bank was funded by a small equity issue and a huge bond issue on the French market, backed by guarantees from the São Paulo state government. While it was technically a foreign bank and did not trade on the São Paulo exchange, it did regularly publish its financial statements in local currency.[25] This allowed me to calculate its profit rates and compare them to the domestic commercial banks.

The Banco de Crédito Hipotecário performed quite well in São Paulo. Its initial returns from 1909 to 1914 were on the order of the profits generated by the defunct mortgage institution Banco de Crédito Real during its healthier days. This French bank steadily earned returns between three and four percent per semester, compared to a profit range of four to eight percent for the two established commercial banks and one to five percent for the newest commercial bank. (Table 4) Like the Banco de São Paulo, the Banco de Crédito Hipotecário earned smaller profits at the end of the war, including one loss, but was recovering by 1920. Its five-year average earnings for the periods 1911-1915 and 1916-1920 were 4% and 5.2% per semester respectively.

In spite of these steady, healthy profits, the São Paulo banking sector experienced almost no growth after 1906. A couple of banks from the late 1890s made it into the economic recovery period of 1909-1912 only to fail. A few new smaller banks began to emerge at the end of World War I. Several small regional banks persisted throughout the period. The bank sector, in other words, was not completely static. However, the only significant growth of the bank sector appears to have come from foreign institutions. Six new foreign banks were founded between 1910 and 1915, compared to just one new domestic bank. Foreign banks took in just 28% of deposits and made 22% of loans in São Paulo in 1901. By 1921 the foreign banks held 60% of deposits and made 59% of all loans.[26]

The Profitability of Banking: Returns to Investors

External measures of profitability, measures which quantify returns to shareholders for their investment in the stocks of banking companies, show how the accounting rates of returns for banking enterprises translated into tangible rewards for those who supplied the capital. To determine how shareholders were compensated for their investment in banking institutions I took the total value of declared dividends for the year and measured them against the year end market values for the banks' stocks. I performed the same calculation on an alternative low-risk investment--government bonds--to determine what would be a lower-bound level of return sought by investors in the Brazilian economy. The results demonstrated that banks consistently tended to pay substantially higher returns than did low-risk government bonds.

The data on the dividend rates of return to investors from 1886 to 1891 and from 1895-on demonstrate that the money the banks made was fairly generously distributed.[27] Most banks up to 1891 paid dividends at an annual rate of between 6% and 16%, compared to bond returns on the order of 4 to 5%. (Table 5) Returns to shareholders in the 1895-1905 period were similarly robust. (Table 6) The city-based banks paid an annual return to shareholders of between 7% and 16%, while regional banks paid from 9% to 19% returns on their stock. The mortgage banks also paid out high returns, though each for different reasons. The Banco de Crédito Real paid dividends worth between 7% and 12% of its stock price, a reflection of its steady earnings, while the Banco União de São Paulo paid returns between 17% and 57%, a reflection of its depressed stock price. Government bonds, by comparison, paid from 2% to 7% during this period.

The small but stable domestic banking sector that emerged from the turn-of-the-century recession demonstrated very consistent returns to its shareholder. The two largest banks paid between 7% and 12% dividends from 1904 until 1920. Government bonds during this period paid between 5% and 6.5% annual returns to investors. (Table 8) Interestingly, the bank whose earnings came under pressure in the war era paid very competitive returns to its shareholders throughout the period. Internal results may have been a struggle for the Banco de São Paulo but outward signs to shareholders were reassuring. Dividend returns were similar to, and in some years even exceeded, those paid by the bank during the economic boom period of 1909-1912.

The higher returns earned by stockholders relative to government bondholders can be thought of as the premium required by banks' shareholders to compensate them for the higher risk associated with the investment. Investors tend to require a higher rate of return on investments perceived to be risky than they do on investments perceived to be secure, and my data bear out this tendency. Premiums paid to bank shareholders in the late 1880s and up to 1891 ranged from 15% to 200%, with the highest premiums paid by the mortgage bank. The Banco de Crédito Real paid between 1.5 times and 3.2 times the returns investors could earn on government bonds, while commercial banks tended to pay something less than two times the bond returns. (Table 5)

The speculation of the Encilhamento years, 1890-1891, surprisingly, did not generate the largest premiums of the entire period. In spite of a widespread reputation as an era of fraudulent business formations, the Encilhamento did not bring such speculation to the bank sector. Rather, it was a time of real institutional expansion and productive lending, characterized by returns to shareholders on the same order as the 1880s. The bigger premiums came in the mid-1890s. By that time, the inflation in the economy was undermining the value of the domestic currency enough to worry policy makers and coffee growers. Although the São Paulo economy was in the process of urbanizing and industrializing, it was still predominantly agricultural with its fortunes strongly tied to the coffee sector. Commercial banks paid their highest premiums ever, from two to four times returns on general government bonds and four to seven times returns on 1868 bonds, in the period from 1895 to 1897. The sole industrial investment bank, the Banco União de São Paulo, paid by far the highest premiums on its capital. These were on the order of four to nine times general bonds and five to twenty-two times 1868 bonds in the late 1890s, due to the Banco União's depressed stock price. The stock price, just 12% of par in this period compared to 90% of par in 1891 and 38% of par in 1899, reflected the pressures on industrial ventures during this period of economic turmoil.[28] Once banks had weathered the recession, premiums declined. This is a reflection of the institutional stability of the surviving banks. In fact, the lowest premiums paid by any banks from 1895-on were paid by the two banks that not only survived the recession but went on to be the only major players in the domestic banking sector up to 1920.

These premiums paid in good times and in bad suggest that bank stocks probably were attractive to investors in spite of a softening agricultural sector, a recessionary macroeconomic environment, and increasing entrance of foreign competition. Indeed, new banks continued to form throughout the period even as others failed. To understand why shareholders would continue to invest in new banks I calculated a measure of total returns to shareholders. Total returns take into account both the dividend payments *and* changes in stock price. This measure is the truest measure of market returns to shareholders because while dividend returns capture the explicit reward paid to investors, most of these investors probably invested on the gamble that their stocks would appreciate. Total returns is presented last because it is the least complete of all the measures I calculated. In order to calculate total returns I require consecutive years' financial statements and stock prices. Many banks did not consistently publish financial statements nor were they consistently traded. The chances of finding both a financial report and a stock price for any given year or set of years were slim, making this market-valued measure a rare species.

In spite of the relative scarcity of data points, the total returns measure indicates some reasonably strong incentives for investors to invest in banks throughout this period.[29] Bank returns to shareholders were greater than investors could earn on any of the major bonds on the market in 67 of 112 observations, or 60% of the time.[30] (Tables 7 and 9) Moreover, the profit potential in bank stocks was much greater than in bonds. (Table 10) The highest return earned on any of the bonds in any year was 28%. Banks paid investors total returns in excess of 28% on twenty separate occasions. Looking at a more reasonable expectation of returns shows that bonds paid returns in excess of 10% just twenty-one percent of the time, while banks paid returns in excess of 10% fifty-five percent of the time.

If the upside potential was greater for bank shareholders than for government bondholders, the downside risk was virtually identical for both stocks and bonds. Investors in bank stocks experienced actual losses, which was always due to a decline in the nominal market value of their stock, in just twenty-four of 112 observations or about twenty-one percent of the time.[31] (Table 10) Bond holders lost money almost as often. Bonds posted losses in fifteen of seventy-six observations or just about twenty percent of the time. The banks' track record, then, was not bad. The downside potential was really no worse than the low-risk alternative--bonds--and the upside was much higher. Certainly the good chance that bank returns would exceed bond returns, the infrequency of actually posting a loss, and the possibility for high double-digit returns on one's investment must have been attractive to shareholders.

Conclusions

The bank reform of 1890 did little to push banks toward a developmentalist role in the early industrialization of São Paulo. Commercial banks had dominated the banking sector before the coffee boom had its full impact on São Paulo in the 1890s and were the most enduring credit institutions through the early industrialization of the region. The timing of their institutional expansion coincided with the rapid growth in coffee production. Their predominance over other types of banking, like investment or mortgage banking, was assured by higher rates of profitability.

One visible indicator of their success was the fact that there was almost continual business formation in the commercial banking sector. Banks formed and failed, but other banks formed in their wake. Investors were willing to fund new banks even in the midst of the recession. This phenomenon is explained by the high upside potential to investing in banks throughout this period. Total returns to bank investors were generally higher than returns to bondholders, sometimes significantly higher, while downside risk was equal to both. Banks represented a good risk to the investor and therefore were able to tap into the capital pool in spite of assorted failures.

Institutionally, the most resilient members of the banking sector were the smaller scale regional commercial banks. These tended to earn the highest returns and pay middling premiums over bonds. These regional banks were the hardiest creation of the era. Though individual regional banks failed during fluctuations in the coffee market, others sprang up to take their place. In fact, while their financial documents are missing from the historical record after 1900, the only new banks to form in any number after the turn-of-the-century recession were regionally-based commercial banks.

By far, the least successful institution was the investment bank. In spite of the reform initiative intended to create a more investment-oriented banking sector, the only bank to invest in industry consistently turned in among the lowest profits of any bank in São Paulo. The only banks to profit less from their business were the other two mortgage or investment banks. These low levels of profits were coupled with an absolute lack of institutional expansion among investment banks. Commercial banks did not uniformly succeed during this period, but as some failed others appeared in their places. By contrast, no domestic investment banks were formed after the initial sector expansion in the early 1890s. Of the three banks that held the developmental charter, two failed and one abandoned banking to pursue its textile business full time.[32] The lack of real diversification away from commercial banks during the coffee boom and early industrialization can be traced, then, to high profitability of commercial banks relative to their mortgage and industrial bank counterparts. This profitability, and the returns it generated for the shareholders, ensured the dominance of commercial banks in the São Paulo economy in spite of a favorable environment.

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Table 1
Bank Profits, 1884-1889
(percent)

Commercial Banks	1884	1885	1886	1887	1888	1889	Avg
Bco do Brasil	10.0	10.3	9.7	5.3	10.0	12.9	9.7
Bco Mercantil de Santos	5.7	2.7	4.8	3.8	4.4	9.0	4.9
Bco Comercial			2.4	2.6	3.0	3.8	3.0
Bco da Lavoura				4.7	3.5	6.3	4.8
Bco Popular					6.1	7.2	6.7
Investment Bank							
Bco de Crédito Real	5.2	6.1	6.7	5.6	6.8	6.2	5.6

Notes: Profitability is defined as the ratio of net earnings (dividends plus changes to reserve and undistributed profit accounts) to shareholders' equity (paid-in capital plus reserves and undistributed profits).
Figures presented here are for the second semester in each year, except 1889 Lavoura and Crédito Real, which are first semester.

Sources: Company Balance Sheets: Arquivo do Estado de São Paulo, various years; and Correio Paulistano, Diario Popular, O Estado de São Paulo, various years.

Table 2
Composition of Investment Bank Portfolios
(percent of total assets)

Bank (Size in 1895)	Portfolio	1890	1895	1900	1904
Banco de Crédito Real	Mortgage	83.7	88.6	94.7	93.8
(US$ 11.0 mm)	Commercial	16.3	11.4	5.3	6.2
		100.0	100.0	100.0	100.0
Banco União de São Paulo	Mortgage	10.2	19.0	25.5	4.6
(US$ 12.5 mm)	Commercial	69.4	50.2	28.0	26.9
	Construction/ Industrial	6.6	20.7	46.5	68.4
	Issue	13.7	10.1	----	----
		100.0	100.0	100.0	100.0
Banco de Santos	Mortgage	3.7	3.4	5.1	----
(US$ 800,000)	Commercial	96.1	96.6	94.9	----
	Construction/ Industrial	0.2	----	----	----
		100.0	100.0	100.0	

Note: Banco de Santos 1900 is June 30, 1899.
Sources: Bank Balance Sheets: Correio Paulistano, Diário Popular, and O Estado de São Paulo, various years.

Table 3
Average Bank Profititability, 1890-1905
(percent)

City Commercial Banks (10,10,12)	1890-1894	1895-1899	1900-1905
Bco Mercantil de Santos (7,10,2)	4.9	2.0	-0.8
Bco dos Lavradores (4,2)	8.1	4.4	
Bco Construtor e Agrícola (4,2)	6.3	4.1	
Bco do Comércio e Indústria de São Paulo (6,10,12)	16.3	8.6	6.1
Bco de São Paulo (6,5,7)	7.5	6.7	4.4
Bco Commerciale Italiano di São Paulo (10)			4.1
Regional Commercial Banks (8,10,6)			
Bco de Araraquara (5,3)	10.2	8.8	
Bco de Piracicaba (6,5)	5.0	6.6	
Bco de Ribeirão Preto (4,1,3)	8.0	13.2	-0.4
Bco União de São Carlos (5,10,3)	8.2	11.9	9.2
Bco Melhoramentos do Jaú (5,3)	8.5	7.1	
Investment Banks (10,10,12)			
Bco de Crédito Real (10,9,8)	3.3	2.7	3.0
Bco de Santos (3,3)	6.8	2.2	
Bco União de São Paulo (4,6,4)	4.9	3.0	-4.5

Notes: Numbers in parentheses are the number of observations I have for each of the three periods. Profitability is defined as the ratio of net earnings (dividends plus changes to reserve and undistributed profit accounts) to shareholders' equity (paid-in capital plus reserves and undistributed profits).
Sources: Company annual reports in Correio Paulistano and O Estado de São Paulo, various dates.

Table 4
Average Bank Profitability, 1906-1920
(percent)

City Commercial Banks (10,10,10)	1906-1910	1911-1915	1916-1920
Bco do Comércio e Indústria de São Paulo (10,10,10)	5.3	6.1	7.5
Bco de São Paulo (10,10,10)	4.5	4.1	2.4
Bco Commerciale Italiano di São Paulo (6)	4.6		
Bco Comercial do Estado (6,10)		3.5	7.8
Investment Bank (3,10,10)			
Bco de Crédito Hipotecário e Agrícola (3,10,10)	3.5	4.0	5.2

Notes: Numbers in parentheses are the number of observations for each of the three periods. Profitability is defined as the ratio of net earnings (dividends plus changes to reserve and undistributed profit accounts) to shareholders' equity (paid-in capital plus reserves and undistributed profits).
Sources: Company annual reports in Correio Paulistano and O Estado de São Paulo, various dates.

Table 5
Dividend Returns to Bank Shareholders and Government Bondholders, 1886-1891
(percent)

Commercial Banks	1886	1887	1888	1889	1890	1891
Bco Mercantil de Santos	7.4	5.9				
Bco Comercial	2.2	3.9	5.0	4.3		
Bco da Lavoura		6.2	8.5	9.9	10.7	3.2
Bco Popular				10.3		
Bco dos Lavradores						10.5
Bco Construtor e Agrícola						11.9
Bco do Comércio e Indústria						7.3
Bco de São Paulo						8.3
Investment Banks						
Bco de Crédito Real	13.6	16.3	16.0	7.7	14.1	
Bco de Santos						10.8
Bco União de São Paulo						8.8
Bonds						
General Bond - 5%	4.6	5.1	5.1	5.3	5.1	4.9
1868 Bond - 6% (gold)	4.6	5.0	5.2	5.8	5.0	4.2

Note: Returns are annual dividends or coupons divided by market value of the stock or bond.

Sources: For dividends, company annual reports. For stock prices, Correio Paulistano and O Estado de São Paulo, various dates. For bond prices, O Estado de São Paulo and Retrospecto Comercial do Jornal do Comércio.

Table 6
Dividend Returns to Shareholders and Bondholders, 1895-1905

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
City Commercial Banks											
Banco Mercantil de Santos	15.4%	12.3%	12.2%	13.3%	12.3%	13.1%	0.0%	0.0%			
Banco dos Lavradores	15.0%	16.2%									
Banco Construtor e Agrícola		0.0%									
Banco Commercio e Indústria		9.3%	8.9%	8.4%	7.7%	7.7%	8.6%	9.4%	10.2%	8.9%	10.1%
Banco de São Paulo		12.0%	12.0%	12.7%			11.0%	14.1%	13.6%	10.0%	9.7%
Banco Commerciale Italiano							6.7%	0.0%	0.0%	7.3%	8.1%
Regional Commercial Banks											
Banco de Araraquara			17.3%								
Banco de Piracicaba	11.0%	9.3%									
Banco de Ribeirão Preto		17.0%				19.2%					
Banco União de São Carlos	10.0%	11.3%	13.2%	12.6%	11.8%	18.4%	16.4%				
Mixed Mortgage Banks											
Banco de Crédito Real (Mortg)	7.4%	9.6%	9.0%	8.4%	9.7%	10.9%	12.1%	23.2%	0.0%	0.0%	0.0%
Banco de Santos	8.0%			0.0%	0.0%						
Banco União de São Paulo	24.4%		57.0%	50.0%	16.2%	25.0%		17.4%	4.1%	5.2%	
Government Bonds											
General Bond - 5%	3.9%	5.6%	6.3%	6.1%	6.0%	6.8%	6.7%	5.6%	5.3%	5.2%	5.1%
1868 Bond - 6%		2.5%	2.5%	3.2%	2.7%		3.9%	3.6%	3.0%	2.9%	
1897 Bond - 6%				7.1%	5.9%	6.4%	6.5%	5.9%	6.0%	5.9%	6.0%
1903 Port ImprovementsBond - 5%									5.1%	5.0%	5.0%

Note: Returns are annual dividends or coupons divided by the year end market value of the stock or bond.

Sources: For dividends, company annual reports. For stock prices, Correio Paulistano and O Estado de São Paulo, various dates.
For bond prices, O Estado de São Paulo and Retrospecto Comercial do Jornal do Comércio.

Table 7

Total Returns to Shareholders and Bondholders, 1887-1905

	1887	**1888**	**1889**	**1890**	**1891**	**1896**	**1897**	**1898**	**1899**	**1900**	**1901**
City Commercial Banks											
Banco do Brasil		6.1%	0.4%								
Banco Mercantil de Santos	5.9%					46.0%	13.1%	3.8%	21.7%	6.2%	0.0%
Banco Commercial	-27.2%	0.0%	21.7%								
Banco da Lavoura	-1.4%	0.2%	55.7%	55.2%	18.7%						
Banco dos Lavradores						10.0%					
Banco Construtor e Agrícola					95.1%	0.0%					
Banco Commercio e Indústria						18.0%	13.0%	14.6%	18.2%	7.7%	10.3%
Banco de São Paulo					16.3%	13.8%	12.0%	17.2%			
Banco Commerciale Italiano											
Banco Comercial do Estado de SP											
Regional Commercial Banks											
Banco de Piracicaba						64.0%					
Banco União de São Carlos						10.2%	18.5%	20.2%	19.0%	11.3%	-5.9%
Mortgage Banks											
Banco de Crédito Real-Mortg BV	12.1%	28.9%	19.3%	43.6%		-15.2%	16.3%	5.0%	-11.5%	-4.6%	-27.0
Banco de Santos									-22.2%		
Banco União de São Paulo								50.0%	259.9%	-19.6%	
Government Bonds											
General Bond - 5%	-5.9%	5.1%	1.0%	10.0%	8.9%	-25.8%	-5.6%	8.7%	7.4%	-6.1%	9.6%
1868 Bond - 6%	-2.3%	0.0%	-4.3%	22.1%	22.3%		3.4%	-19.2%	20.2%		
1897 Bond - 6%									27.6%	-2.7%	4.3%
1903 Port ImprovementsBond - 5%											

Note: Total Returns are annual dividends or coupons plus the change in the market value of the stock or bond.

Sources: For dividends, company annual reports. For stock prices, *Correio Paulistano* and *O Estado de São Paulo*, various dates. For bond prices, *O Estado de São Paulo* and *Retrospecto Comercial do Jornal do Comércio*.

Table 8

Dividend Returns to Shareholders and Bondholders, 1906-1920

	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	19
City Commercial Banks												
Banco Commercio e Indústria	8.9%	8.6%	9.0%	8.4%	8.3%	11.9%	7.3%	9.0%	9.5%	12.6%	7.3%	8
Banco de São Paulo	8.6%	8.1%	9.2%	8.8%	8.5%	6.7%	7.8%	10.2%	11.4%	8.8%	8.2%	9
Banco Commerciale Italiano	4.3%	0.0%	6.2%	0.0%								
Banco Comercial do Estado de SP								3.0%	6.3%	6.9%	6.4%	6
Mortgage Banks												
Banco União de São Paulo	14.0%											
Government Bonds												
General Bond - 5%	5.1%	5.0%	5.0%	5.2%	5.1%	5.1%	5.2%	6.4%	6.3%	6.4%	6.4%	6
1897 Bond - 6%	5.9%	6.2%	5.9%	5.9%	6.0%	5.9%	6.0%	6.6%	6.5%			
1903 Port ImprovementsBond - 5%	4.9%	5.0%	5.0%	4.9%	4.9%	4.9%	4.9%	5.6%	5.4%	5.8%	5.5%	5

Note: Returns are annual dividends or coupons divided by year end market value of the stock or bond.

Sources: For dividends, company annual reports. For stock prices, *Correio Paulistano* and *O Estado de São Paulo*, various dates.

For bond prices, *O Estado de São Paulo* and *Retrospecto Comercial do Jornal do Comércio*.

Table 9

Total Returns to Shareholders and Bondholders, 1906-1920

	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917
City Commercial Banks												
Banco Commercio e Indústria	23.7%	12.0%	4.9%	30.9%	9.5%	-22.3%	74.2%	-11.0%	4.0%	43.0%	9.0%	10.2
Banco de São Paulo	22.6%	14.3%	-4.1%	14.2%	12.8%	35.2%	-7.8%	-15.6%	-37.7%	22.0%	16.2%	-7.5%
Banco Commerciale Italiano	24.6%	4.0%	-4.2%	8.5%								
Banco Comercial do Estado de SP								-12.0%	2.0%	35.8%	30.0%	7.1%
Government Bonds												
General Bond - 5%	4.0%	6.2%	6.3%	0.7%	7.3%	6.1%	3.0%	-14.4%	9.0%	4.4%	6.4%	11.8

1897 Bond - 6%	7.5%	1.5%	10.3%	6.4%	4.9%	6.5%	4.5%	-2.5%	7.7%	4.9%		
1903 Port ImprovementsBond - 5%	7.7%	1.9%	5.0%	6.5%	5.8%	5.4%	4.3%	-7.1%	7.8%	-0.5%	10.7%	0.6%

Note: Total Returns are annual dividends or coupons plus the change in the market value of the stock or bond.

Sources: For dividends, company annual reports. For stock prices, *Correio Paulistano* and *O Estado de São Paulo*, various dates.

For bond prices, *O Estado de São Paulo* and *Retrospecto Comercial do Jornal do Comércio*.

Table 10

Relative Levels of Total Returns to Shareholders and Bondholders, 1887-1920

Levels of Return	All Bonds	Share of Total Observations	Bank Stocks	Share of Total Observations
Loss	15	20%	24	21%
0% to 9.9%	45	59%	27	24%
10% to 19.9%	9	12%	29	26%
20% to 28.0%	7	9%	12	11%
28.1% and up	0	---	20	18%
Total	76	100%	112	100%

Note: These numbers are compiled from the results in Tables 9 and 10.

A Surprising Development:

Bank Lending and Profitability in São Paulo, 1884-1920

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Abstract: This paper examines the institutional characteristics of the banking sector in the São Paulo economy during the era of the coffee boom and early industrialization to understand why institutions offering only short term credit dominated in spite of clear demand for long term credit. Although the general economic expansion of the late nineteenth century produced a rapid expansion in the bank sector, suggesting ample supply of capital, and although a receptive regulatory environment was created by the Republican government to promote long term lending, the São Paulo banking sector all but failed to respond with appropriate institutional development. Through an analysis of bank profitability and returns paid to investors I find that the expansion of the sector favored commercial banks because these were consistently the most profitable institutions. The three banks offering long term credit routinely under performed commercial banks, and the lone institution engaged in industrial development demonstrated the lowest rates of profitability of all banks during the period under study. As capital followed profits, then, the expansion of the banking sector at a time of agricultural, industrial and commercial dynamism took place almost exclusively through institutions providing short term commercial credit.

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History Department and the National Endowment for the Humanities dissertation grant program. Research assistance was provided by Maristella Ansanelli and Luis Fernando Vasconcellos.

All errors are mine.

NOTAS:

[1]Gerschenkron (1962). Quote is from page 8.

[2]For example, an 1860 law regulating the formation of joint-stock companies was known as the Lei dos Entraves, or Law of Impediments because while it apparently tried to promote business development through the public sale of equity, it saddled investors in such companies with unlimited liability for the debts those companies. Such a provision was extraordinarily risky, virtually assuring that new business formation under the joint-stock format was rare. Brazil, Law 1083, August 22, 1860 For a fuller treatment of this subject, see Hanley 2001.

[3]Brazil not alone. Mexico had nearly identical problems, though these were complicated by the government's tight control over business formation. See Haber (1989) Chapter 5.

[4]The reform was written in Decree 165 of January 17, 1890. At least 22 new banks were formed in the two years following the reform, compared to only 6 banks in the period 1856-1889. *Coleção de Leis e Decretos.*

[5]All publicly held banks were required by law to file monthly financial statements with the provincial government. The Imperial Section of the São Paulo State Archives maintained these record from 1865 to 1889. Because the manuscript section of the Archives is limited to documents from the imperial period, which ended with the declaration of the Republic in 1889, financial statements for the 1890 to 1920 period were culled from three São Paulo newspapers. These are the *Correio Paulistano*, the *Diario Popular*, and the *Estado de São Paulo*.

[6]The term "exchange" is used rather than "stock market" because the São Paulo Exchange, known as the Bolsa de São Paulo, traded stocks, government bonds, mortgage-backed paper, and letters of credit.

[7]The *Retrospecto Commercial*, a year-end publication of the *Jornal do Comercio* of Rio de Janeiro, published the monthly selling prices on a variety of government bonds. São Paulo newspapers, principally the *Correio Paulistano*, printed advertisements by the banks listing the interest rates paid on deposits of various types and terms, rates which were honored until a revision was printed or declared. The newspapers also published the dividends declared by banks and other companies, such as railroads and public utilities, either as an amount per share or as a rate on paid-in capital. Finally, newspapers printed announcements by brokerage firms for the purchase or sale of different stocks at certain prices. Later, with the organization of the formal stock market after 1891, the *Correio Paulistano* and *O Estado de São Paulo* published daily or weekly price quotes of instruments offered on the São Paulo exchange and prices and volumes of actual transactions that took place.

[8]The author gratefully acknowledges the generosity of Professor Flavio Saes of the Faculdade de Economia e Administracão, Universidade de São Paulo. He provided me with many of the financial statements employed in this study.

[9]The "mil-reis," the Brazilian currency of the era, and was expressed as 1$000. One mil-reis was worth between 35 and 50 cents. 90 million mil-reis was worth roughly US$ 30 to 45 million. Asset figures are expressed here in nominal terms and are taken from published balance sheets.

[10] The absence of information on these private banking houses apparently bothered the provincial government. In 1874 the provincial government requested of the private banking houses that they submit monthly financial statements. Each filed a letter respectfully declining to comply, stating that since they were not publicly held, and therefore not chartered by the government, they were not required to divulge any financial information. (AESP, numero de ordem 2138: Bancos 1865-1884, folder 1874.)

[11]In the 1890s, only two private banking houses operated compared to at least twenty-eight publicly held Brazilian banks. I found no evidence of any private banks after the turn of the twentieth century.

[12]I left my profitability figures in their semester form because banks did not reliably publish data for every semester, and several banks experienced changes in earnings from semester to semester that were large enough to discourage any assumptions about dividend payments over time.

[13]The fourth new commercial bank, the Banco de São Paulo, was founded in 1889 and had not yet generated enough financial data to calculate returns.

[14]This bank was the product of Provincial Law 145 of June 25, 1881, which authorized credit specifically for agriculture, and which backed the loans made by these banks with provincial treasury funds. Banks could loan for terms of 5 to 20 years at a rate up to 9% per year, and were guaranteed 7% returns by the provincial government.

[15]I define earning assets to be all asset accounts representing investments on which banks earn interest. These include short and long term loans, discounted bills, stocks and bonds.

[16]Levi (1987), Mello (1985) and Saes (1986).

[17]The reforms are most closely associated with the pro-business finance minister, Rui Barbosa. The most important reforms to the business community were those which lifted the unlimited liability that had dampened investor interest in joint-stock companies for decades. The reforms of January 1890 lowered the capital threshold for operation and virtually eliminated all shareholder responsibility for the value of their shares.

[18]The number of business formations in 1890 is from BOVESPA (1990) pp. 15-16. The number of joint-stock companies operating in São Paulo in late 1887 is from stock quotes printed in the *Correio Paulistano*, November 5, 1887.

[19]*Colecao de Leis e Decretos*. Decree 165, January 17, 1890 and Decree 169A, January 19, 1890.

[20]The businesses in which banks could engage were specified in their by-laws. Legally, they were restricted to only those activities.

[21]While I use the term "investment banks" for the Banco de Santos, Banco União de São Paulo and the Banco de Credito Real, all held portfolios in several businesses: mortgage banking, commercial banking, and industrial/construction banking.

[22]Because coffee trees take four to six years to bear fruit, the fruit from the trees planted in the early 1890s only came on the market in the late 1890s. The expanded supply, therefore, could not be controlled nor contained until well after the crisis was underway.

[23]The city commercial banks were likely to have affiliates in some of the larger regional centers, such as Campinas, but there is no evidence of other banks headquartered in the four regional centers under study here.

[24]The four regional banks at their peak had a combined total equity equal to two million mil-reis. The city banks ranged from five to twenty million mil-reis each.

[25]This bank was acquired by the state of São Paulo in 1926 to become the state bank. It is known today as the Banco do Estado de São Paulo, or BANESPA. Because of this, some historians consider it a domestic bank from the beginning while others consider it a foreign bank. Saes (1986) and Triner (1994) treat it as a domestic bank. I consider it a foreign bank.

[26]Saes (1986) pp. 100-108.

[27]Stock trading occurred regularly after 1886, through an informal association of brokers, and on the new São Paulo stock and bond exchange from 1890 to 1891. The first exchange failed in 1891 and didn't reorganize until 1895. Although there is some evidence that trades took place between 1892 and 1894, no prices were published. Price quotes appear regularly again after 1895.

[28]The annual reports of several manufacturing firms during this period refer to the economic recession as the source of depressed profits. In addition, the government was hostile to "unhealthy" business and took a sink or swim attitude that gave these companies no relief. New consumer taxes imposed to bring in government revenue were absorbed by the manufacturers, since customers couldn't take any price increases.

[29]Because banks always paid dividends, with just two exceptions, losses reflect a decline in the nominal market price of the stock.

[30]I calculated returns on four government bonds. All bonds four were traded regularly.

[31]It should not be surprising that the three banks engaged in long-term lending were responsible for a combined nine of those twenty losses.

[32]This turned out to be a very good idea. While the Banco União de São Paulo was a mediocre bank, it was a very successful textile company. Its core operation, the Votorantim company, is today one of the largest industrial conglomerates in all of Brazil.