Banking and Economic Development
Brazil, 1889–1930

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Chapter 5

The Productive Sectors, Banking, and Bankers

Brazilian banks did not extend long-term credit that financed the construction of new economic capabilities, such as industrial manufacturing. They limited their activities to financing the traditional activities of commercial exchange. Then, how could banking be important to the fundamental economic transformations in the private productive sectors of the economy during the First Republic? And, what might have been important about banking? These are the questions that this chapter addresses, and they have been central to the study of banking history in other settings.

One of the persistent interests of banking historians has been the connection between the development of banking systems and industrialization. As with state-building, the scale of capital required for sustained industrialization and the risks involved in the innovation of new production technologies have typically induced its practitioners to look for new financial methods. The goals motivating financial development have included attracting increasing volumes of capital, involving new participants, devising new methods to control and share risks, and enhancing efficiency. Existing research on the effects of banking on economic structure focuses on industrialization in currently developed economies.[1] That body of work comes out of the desire to understand the origins of industrial development and its attendant financial requirements for capital formation and easing the conduct of transactions. Historians and economists had long noted the (approximately) simultaneous development of the two processes. History and logic have contributed to the belief that they depended upon each other. In the classic typology of banking development, delineated by Gerschenkron, the scale of banking evolved from small organizations that maintained short, relatively risk-free time horizons, to organizations of larger scope able to absorb the increased risk of long-term investment, and ultimately to include the State as entrepreneur-banker with an economy's later onset of industrialization. Gerschenkronian logic related the scale of banking and the nature of its entrepreneurialism to the scale, capital intensity, and technological complexity of prevailing industrial practices at the time the process began.[2] Despite many challenges by specific cases, economic historians have generally retained this framework for understanding banks and development.

More broadly than industrialization, however, the functions that banking fulfilled facilitated market building: the formal, depersonalized exchange of an increasing diversity of goods and services among larger groups of individuals. Because commercial banking systems limit their activity to short-term transactions, they did not participate directly in capital formation as economies began to industrialize. Focus on this constraint has minimized attention to their significant contribution to mercantile exchange. Banks broadened the scope of accumulation and allocation of resources and facilitated the financial aspect of commercial exchange. As consumers increasingly met their daily subsistence needs by purchasing goods in the marketplace, and as domestically manufactured goods represented a greater proportion of their consumption, banks responded to the need for credit that supported the expanded production and distribution of goods.[3] They provided working capital to producers and to the distribution network of wholesalers and retailers. In doing so, they smoothed the timing differentials of payments between the beginning and end of each step from the production to the consumption of goods and services. The concentration on commercial finance both allowed goods to flow more freely and it allowed entrepreneurs to direct their wealth to the long-term capital formation required to sustain these developments. These were among the transformations necessary to sustain industrialization, beyond the construction of manufacturing concerns in which to expand the production of goods.

Such transformations were of crucial concern to shaping the society of the First Republic as it anticipated changes that were as profound as industrialization. Simultaneously with the implementation of the processes of industrial manufacturing, population and urban growth, the formation of an industrial and urban labor system based on wage compensation, the commodification of domestic agriculture, and significant territorial expansion of export agriculture challenged traditional life. All of these processes were mutually reinforcing and they required new financial mechanisms.

Some of the better-studied manifestations of these changes at the beginning of the twentieth century have included the formation of an industrial workforce, race relations, physical infrastructure, and the organization of workers and employers.[4] Although slow to spread, the shift from subsistence- to market-based consumption was one of the underlying fundamental economic and social transitions that restructured lives during the Republic.

The increase of industrial production is a useful indicator of the widespread attendant changes in consumption, labor, and commerce. Brazil remained, relatively, an agricultural economy throughout the First Republic, with about 17 percent of national income deriving from industry in 1930.[5] Nevertheless, industrial growth was rapid during the first years of the twentieth century. Available sectoral indices suggest that industrial production increased at an average rate of about 5.4 percent per year from 1906 to 1930, and agricultural production (including coffee) grew at a rate of about 3.2 percent annually.[6] The construction of industrial capacity has received wide attention,[7] as has the economic sociology of industrialization.[8] The development of banking proceeded in conjunction with other fundamental adjustments in social organization that supported industrialization and other forms of market building. In order to accommodate the financial aspects of change, Brazilian entrepreneurs looked for new methods of financing innovative endeavors, both to expand their reach and to share the risks inherent in innovation, just as their peers in other locations did. Banking responded to this need.

This chapter explores the extent to which, and ways that, the growth of banking and industry, or economic transformation, were related to each other. Building on an understanding of the banking business, the chapter focuses on the effects of banking within the private sector. It approaches the topic in a manner different from that typically applied in Brazilian historiography. Rather than emphasizing issues of money supply, this chapter highlights questions about the demand for money—and specifically that portion of money housed in banks. It addresses the basic questions of: How large was the banking system relative to the economy? Did its growth correlate with economic growth generally, or with the increase of industrial output (as a rough approximation of industrialization)? How did banking, especially of the short-term commercial variety, affect industrialization? Why did entrepreneurs become bankers? Two bodies of evidence provide information to pursue these questions. Quantitative data on banking derived from aggregated firm-level bank balance sheets covering the period from 1906 to 1930, as in Chapter 4,[9] combine with the available information on sectoral economic growth to explore statistical relationships between the growth of banking and production. In addition, an examination of the formation of privately owned banks provides useful insight into the motivations of bankers and their intersectoral connections.

THE SIZE OF THE BANKING SYSTEM RELATIVE TO THE ECONOMY

Traditional literature represents Brazil as historically "under-banked." The characterization reflects the low volume of banking services.[10] Relative to criteria that financial historians have applied, this conclusion stands. The most commonly accepted measure of the extent to which banking serves an economy is the ratio of bank credit to national income.[11] This measure of financial depth indicates "efficiency in the performance of one of [the banking system's] two essential functions: securing control of disposable funds,"[12] and leveraging those funds into productive investments. The most conservative estimate of financial depth excludes the public-sector banks—the Banco do Brasil and the state-subsidized organizations. (Excluding these banks overcorrects for the role of public treasuries, since these banks undertook a significant portion of their business as normal commercial transactions.[13]) Comparisons of financial depth confirm that the banking sector had a lesser presence in Brazil than it did in other economies during the initial construction of their industrial structures (Table 5.1).

Despite its low level, the rate of the banking system's increasing involvement in the economy is impressive. Banking grew much more rapidly than did other components of the economy. Previous chapters have demonstrated the significant growth of the banking system relative to total output and its incursion in the money supply (Table 4.1 and Figure 3.3). A similar pattern of the enhanced economic importance of banking appeared in the trend of financial depth, increasing from 3 percent of national income in 1906 to almost 18 percent in 1930 (Figure 5.1). Relative to sectoral growth, its record was also impressive. The size of the banking system (real, price-adjusted deposits) increased thirteenfold from 1906 to 1930, with privately owned domestic banks growing by a factor of 8.6. During this period, industrial output increased by a factor of only 3.7 and agricultural output approximately doubled (Figure 5.2 and Table A.11).

In addition to growing more rapidly than the productive sectors of the economy, after the reorganization of banking in 1906, bank deposits constituted a steadily increasing proportion of money.[14] The share of bank deposits in the money supply more than tripled, from 20 percent in 1906

Table 5.1 Financial Depth

	Bank credit as a % of national income: *Total credit*	*Privately owned banks*
Brazil, 1906–1930:		
1906	3.4	3.0
1930	17.5	9.4
maximum (1922 for total; 1921 for private)	17.6	12.4
Comparative points of reference:		
Argentina		
1905		27
1930		43
England & Wales		
1775	15.2	
1844	34.4	
France		
1800	1.5	
1870	15.6	
Russia		
1914	61	
United States		
1871	29.8	
1899	62.0	

Sources: Brazil: see Data Appendix. Argentina: della Paolera & Taylor, 1997: 8-9 and Table 1. Other country data: Cameron, 1967: Table IX.1.
Notes: The European and U.S. comparative points of reference represent periods that economic historians have found to cover early industrializations.

Mortgages are included in this measure of Brazilian bank credit, consistent with the comparative data.

to 68 percent in 1930.[15] The money supply's increasing composition of deposits had three potential benefits for the economy. First, the increase of the deposit base created a larger capacity for the banks to extend credit. Although they did not aggressively create credit, it grew in parallel with deposits (Table A.1). Second, the willingness of Brazilians to place deposits with banks, rather than holding currency as a store of resources, implied increasing stability of and strengthening confidence in banking institutions. Third, having a larger share of money in the form of bank deposits improved the efficiency of commerce by settling a larger share of transac-

Figure 5.1 Credit as Share of National Income (Percentage)

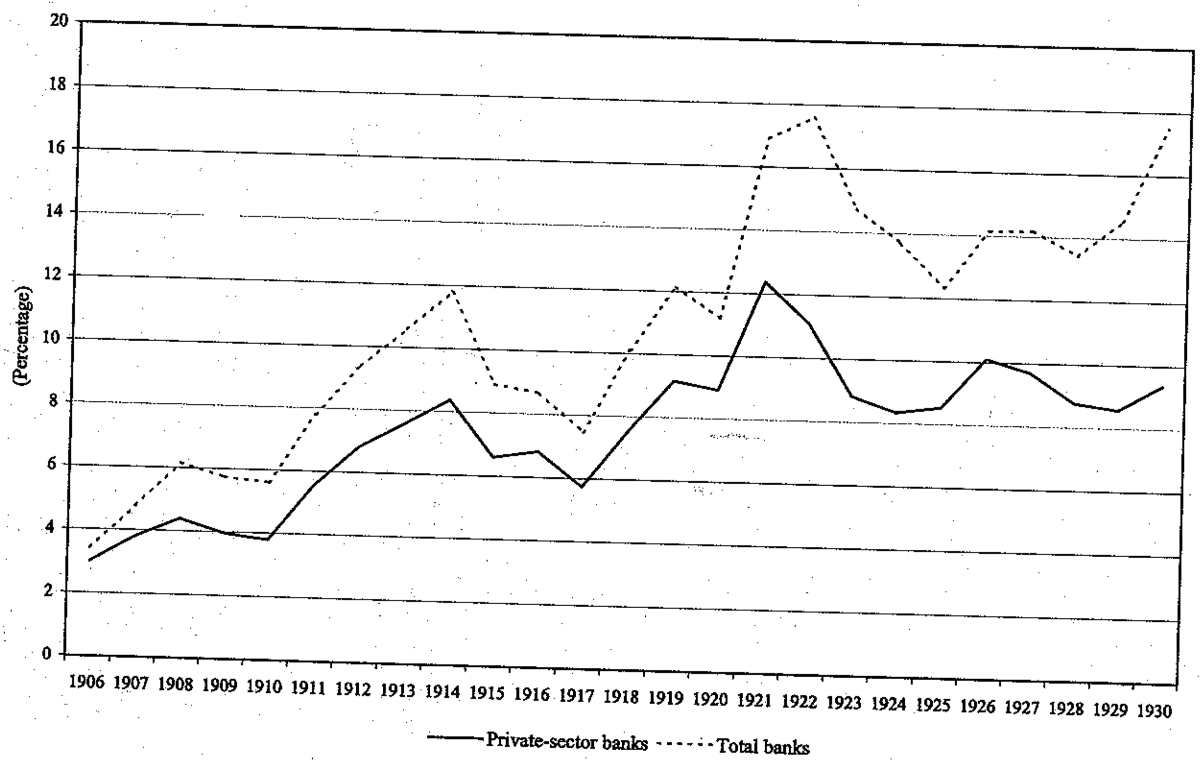
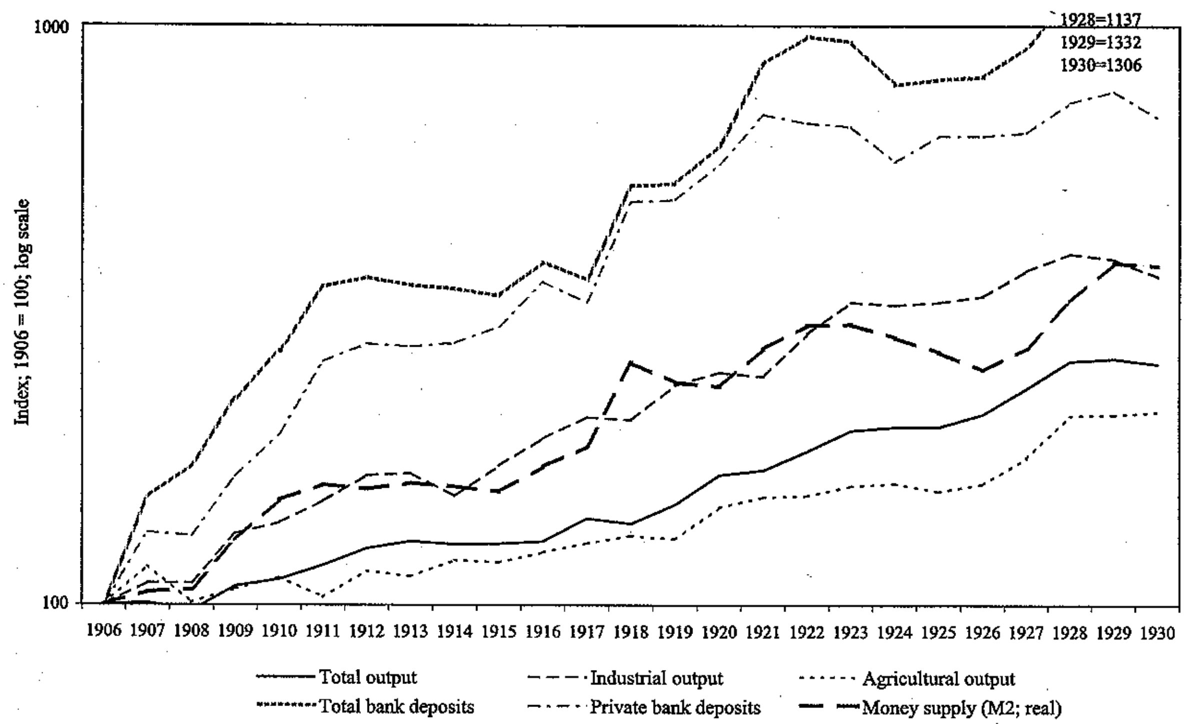


Figure 5.2 Aggregate Economic Growth Measures (1906 = 100)



tions within the banking system, without the actual exchange of currency or barter. The larger share of bank deposits in the total pool of money indicated that economic agents shifted the medium by which they completed transactions from cash or informal means (often barter) toward bank-mediated financial flows.

BANKING AND STRUCTURAL ECONOMIC CHANGE

Assessing the demand for banking, rather than undertaking a traditional money supply analysis, offers an alternative approach to understanding linkages with the productive sectors. Banking historians have identified empirical relationships between banking and industrialization, even in cases in which structural constraints limited the direct extension of credit for the construction of industrial plants. Historians have also considered the interrelationships between the nature of banking systems and the timing and manner of industrialization. They have been much less successful when attempting to explain the causality motivating these relationships. The problems of doing so in the Brazilian case are no easier to resolve.

Brazil experienced the simultaneity of industrialization and the formation of a modern banking system found in other economies. Although Brazil remained a predominantly agrarian society, the processes of industrialization became firmly implanted during the First Republic,[16] along with the emergence of the banking system. Further, most studies imply a limited role for finance in industrialization. Dean[17] concluded that industry was self-financing; that is, the investment necessary to construct, man, and operate manufacturing companies came from existing private wealth and reinvestment of profits and therefore relied upon prosperity generated in other sectors, notably coffee. Peláez[18] found that government policy actively impeded the allocation of financial resources to industry in preference to supporting the coffee sector. Suzigan[19] has developed a more persuasive argument that prior to 1930 (and most strongly prior to 1920) the development of industrial capacity was positively related to the prosperity of the coffee sector and expansive monetary policy, but that it gradually became self-sustaining.

These indications suggest that, if it existed, the connection between banking and industrialization was indirect. Bank credit did not directly finance the construction of industrial plant and equipment. Because banks were commercial in nature, they extended only short-term credit with personal or commercial collateral. Credit supported the expanded volume and range of ongoing commercial transactions and freed investors' wealth for

long-term capital investment. Banking and industrialization were mutually supportive.

The data allow a test to establish the presence and significance of this relationship in the Brazilian economy. A simple model of the supply and demand for banking following elementary economic principles postulates that the demand for banking within an economy should move in the same direction as production and vary inversely with price fluctuation. The available data also allow for sectoral disaggregation to test the connection with increasing industrial production, as a succinct indication of its importance to banking development (Table 5.2;[20] the Appendix to this chapter on the Model of Demand and Supply of Banking discusses the methodology and Appendix Tables A.13a and A.13b present a wider array of tests). The results of these regression tests conform to expectations about the relationships between the real (inflation-adjusted) size of the banking system and the levels of output and prices. The interdependent relationships between banking and growth by sector and by type of bank provide more nuanced interpretations. The results also substantiate a stronger relationship of banking with industry than with agriculture.

The size of the banking system as a whole fluctuated in the same direction as production, and it fluctuated inversely (and more strongly) with the price level.[21] The positive correlation between banking and production and the stronger negative correlation with prices held for both the industrial and agricultural sectors separately, as well as for the total economy. The consistently stronger relationship with prices than with production confirms the importance of money and international finance for the domestic Brazilian economy. The transmission of the international environment to the domestic economy occurred through the mechanisms of money and prices. In this specification, the relationship between the fluctuation of banking and prices expresses the monetary linkage created by the fluctuation value of the mil-réis. These tests concur with all expectations and demonstrate the importance of price level fluctuation to the banking system. The strongly negative connection between prices and demand for banking supports the developmentalist hypothesis that monetary policy favoring domestic financial mechanisms and price inflation spurred the construction of manufacturing capacity because of the implicit price barriers impeding imports due to low value of the mil-réis.[22]

Banking growth showed no significant empirical relationship with coffee. The relationship between fluctuations in banking and the coffee sector, to which contemporary bankers and later historians[23] assign a predominant presence in banking transactions, was statistically insignificant (as indicated by the low proportion of explanatory value, responsiveness, and reliability—the values of R^2, correlation coefficient, and *t* respectively in Table 5.2). The valorization (price-control) programs, which both provided exogenous control of coffee prices and initiated demand for bank transactions for much of the period, significantly impeded the market-driven relationship between coffee prices and money or the banking system. While this result supports a conclusion that coffee support programs were successful, it does not indicate who benefited from the programs.[24] The total agricultural sector also demonstrated a relationship with banking that was statistically insignificant (Table A.13a).[25]

The development of banking and industry demonstrated a convincing relationship, despite the limited opportunities for banks to directly finance industrial production. The correlation with banking was stronger for industrial production than for other segments of the economy.[26] The significant correlation between the (price-adjusted) size of the banking system and production suggests that bank financing capabilities were related to the rate of industrialization. This influence derived from the cumulative effects of the banking system in freeing up capital for long-term investment and in financing the distribution of goods and services, rather than the direct route of participation in constructing industrial capacity.

Privately owned banks also had a closer connection with industrial growth than did the public-sector organizations. From this perspective, foreign and domestic banks did not differ significantly. (Total private banks are shown in Table 5.2 and the disaggregated results are presented in Table A.13a.) In light of the importance of monetary actions for the banking system and industrialization, and the conduct of monetary policy through the Banco do Brasil, the stronger relationship between private-sector banking and industry is interesting. At the Banco do Brasil and the state-owned banks, supporting industrialization competed with public-sector and monetary goals. Supporting the hypothesis (in Chapter 7) of their similar purposes, the regression results for the Banco do Brasil and the state-owned banks were similar in direction, order of magnitude, and significance. The very different growth trends of these banks (Figure 4.2) suggest that they served distinct markets, again anticipating the analyses of Chapter 7. For current purposes, their comparison with private-sector banks is most revealing. Without the concerns of exercising monetary authority or mediating political interests, private-sector banks responded closely to economic impetus.

These findings, especially the lack of a correlation between fluctuation in the coffee sector and the growth of banking combined with a strong

Table 5.2 Banking, Growth, and Prices

	Dependent variable: (Real) bank deposits: Total Brazil		Total private		State-subsidized		Banco do Brasil	
	ß	*(t)*	*ß*	*(t)*	*ß*	*(t)*	*ß*	*(t)*
Total prices	-2.40	(-2.85)***	-2.03	(-2.54)**	-9.53	(-1.66)	-11.58	(-1.42)
Total production	1.27	(1.23)	0.96	(1.03)	7.71	(1.66)	5.83	(0.89)
Constant	0.14	(2.53)**	0.12	(2.28)**	0.24	(1.10)	0.37	(1.16)
R^2	0.28		0.24		0.14		0.09	
Total prices	-2.45	(-3.04)***	-2.14	(-2.78)***	-14.31	(-1.18)	-10.58	(-1.59)
Industrial production	1.25	(1.95)*	1.16	(1.98)*	5.82	(0.98)	4.61	(1.20)
Constant	0.13	(2.53)**	0.10	(2.10)*	0.41	(1.19)	0.31	(1.18)
R^2	0.31		0.28		0.06		0.11	
Coffee prices	1.32	(1.15)	1.35	(0.96)	3.36	(1.05)	3.41	(0.72)
Coffee exports	0.05	(0.11)	0.07	(0.16)	0.32	(0.27)	0.28	(0.22)
Constant	0.00	(0.03)	-0.02	(-0.15)	-0.01	(-0.04)	-0.12	(-0.29)
R^2	0.07		0.05		0.05		0.03	

Source: Derived from Table A.2.

Notes: See Appendix, "Model of Demand and Supply of Banking" for an explanation of the data and the two-stage least squares regression model. Regressions cover the period 1907-30. All variables are measured as rates of change. Rates of change of bank deposits are calculated after adjusting for price inflation; they are based on the aggregation of firm-level data (see Data Appendix). "Total private" includes privately owned domestic and foreign banks. (See the Table A.13a for foreign and domestic banks, individually. They do not produce significantly different results.) "State-subsidized" are Banespa and Crédito Real (MG).

N=24.

* significant at 5% level.

** significant at 1% level.

*** significant at .05% level.

ß: Correlation coefficient.

relationship between industry and banking, confirm that the effects of bank intermediation were circuitous, working through the avenues of distribution rather than production. Nevertheless, they also substantiate the empirical relationship between banking and the productive economy that existing historiography and theory anticipate. The regressions demonstrate that banking and production were linked through real, as well as monetary, mechanisms. The statistical exercise does not explain the causes or nature of that relationship. The regression statements specified the direction of causality as running from production and prices to banking; i.e., that changes in monetary policy and production generated fluctuations in the size of the banking system. Econometric tests to determine the antecedence of banking or output growth (if not the direction of causation) yield indeterminate results,[27] supporting the assumption that banking and industrialization relied upon each other to become self-sustaining, rather than sustaining a unidirectional causal relationship.

For insight on the causal factors underpinning the connection between banking and industrial development, one must consider issues subtler than identifying the sectoral distribution of credit. As a practical consideration and reflecting the concerns of bankers, banks' balance sheets did not identify credit by its destination sector. Bankers intended their funds to support a specific type of transaction, mercantile exchange, without regard to sectoral allocation. The cumulative outcome of the daily conduct of individual banking transactions was to create a web of financial flows between businesses and between sectors. The result was that banks intermediated the intersectoral accumulation and allocation of resources. In this process, they contributed to larger and more dynamic markets within which commercial exchange took place for a wider variety of goods and services. Exploring how banking supported, or deterred, structural change in emerging sectors and processes of the economy gives additional perspective to understanding the nature of intersectoral intermediation of financial resources.

THE MULTIFACETED BUSINESS TIES OF BANKERS

Examining individual banks and bankers who became active during the First Republic helps to illustrate the underlying nature of banking's intersectoral relationships and the web of connections that their transactions created. Specific cases demonstrate the mechanisms of bank-supported economic change. Observing the formation of new banks is especially useful for this purpose. Five joint-stock limited-liability banks that formed after the abolition of slavery provide interesting examples. Reflecting their increased stability, the newer organizations had long lives. Four of the banks survived into the late twentieth century. These banks began their lives as privately owned domestic organizations; listing their equity shares on the public securities exchanges was an important step, denoting limited liability and freely transferable ownership. Four of the banks became large and influential, and their senior managers were important in a wide array of activities. (A group of foreign owners took over one of the four surviving organizations.) The common elements of the cases elicit the means by which these organizations intermediated growth and structural change.

In January 1890 (two months after the end of the monarchy and the declaration of the Republic), Antônio Prado took over the small Casa Bancária Nielson & Comp.[28] In doing so, Prado opened and became the first president of the Banco de Comércio e Indústria de São Paulo (Comind).[29] He remained president of the bank until 1920, by which time it had become the largest bank in São Paulo and one of the largest in Brazil. The Prado family had established itself prominently in the economic and political elite of both São Paulo and Brazil by the beginning of the nineteenth century. Tax collection and exporting (but not producing) sugar provided the family's early wealth. By the middle of the nineteenth century, the Prados had diversified their activities to become major participants in the burgeoning coffee complex; they were both *fazendeiros* (plantation owners) and exporters. The baron of Igauape, the patriarch of the Prado clan, began the family's association with banking in the 1850s, as the president of the São Paulo affiliate of the (second) Banco do Brasil; the Prado family held about half of the affiliate's capital.[30] At least one family member[31] was also involved in the formation of the short-lived Casa Bancária da Província de São Paulo in 1885.[32] Other business endeavors of the family during the last quarter of the nineteenth and beginning of the twentieth centuries extended to widespread holdings of coffee plantations, livestock and hide-tanning, the first Brazilian-owned refrigerated meatpacking plant (jointly owned with Alexandre Siciliano, an important Italian immigrant entrepreneur), and a glassworks plant. The family also had large equity positions in the Rio Claro and Paulista Railways; Antônio Prado served as president of both. The Prado family extended its activities to banking because it diversified their economic holdings toward new activities, while still supporting its traditional sources of wealth. Toward these ends, they took advantage of the eased Commercial Code reforms of 1890 to incorporate a joint stock bank. During the 1890s the bank had significant share holdings in Prado family enterprises.[33]

Comind became a large and influential bank in the paulista economy and the national banking system. The bank maintained a very conservative business profile during the First Republic. Its reserve ratio was always above the average reserve ratio of private domestic banks, reaching 60 percent in 1910 and 55-57 percent in 1915-16 (years of recession and unstable financial situations).[34] Throughout the period, Comind was one of the largest banks in Brazil; usually it was either the largest or second largest (excluding the Banco do Brasil, Table A.7). Reflecting its size by 1906, it grew more slowly and steadily than the banking system as a whole. Even so, at its largest in 1928 (before the recession beginning that year), Comind's real (price-adjusted) deposit base was almost four times its size in 1906. The bank became a crucial nexus for early industrialists. During the 1920s, such major industrial entrepreneurs as Jorge Street (primarily textiles) and Roberto Simonsen (construction and engineering) served as directors of the bank.[35]

In another example, Francisco Matarazzo exemplified the paulista immigrant-merchant-turned-industrialist.[36] Matarazzo arrived in São Paulo from Italy in 1881, slightly in advance of the massive, post-abolition wave of European immigration that was important to all of Brazil, but especially to São Paulo and its coffee expansion.[37] Beginning as a dry goods merchant, Matarazzo soon expanded into the production, canning, and distribution of lard. He then diversified to other consumer goods such as milled flour and rice, canvas sacks, soaps, and oils. Initially he banked with the Bank of London and Brazil. But, by 1900, Matarazzo joined forces with other Italian immigrants to open the Banco Commerciale Italiano di São Paulo. In 1905, he participated in the formation of a second bank, also with Italian immigrant partners, the Banco Italiano del Brasile. The two banks appear to have merged shortly after the opening of the Italiano del Brasile.[38] Then, in 1910, the Banque Francesse et Italiano, headquartered and managed in Paris, took over the Commerciale Italiano.[39] Matarazzo remained an important shareholder. His banking interests remained organizationally separate from the incorporation of the family industrial conglomerate. By the end of the 1920s, family enterprises had further diversified to include successively more sophisticated industries. They established monopolies in producing rayon, and in refining and deodorizing cottonseed oil. The family-owned conglomerate also owned equipment-maintenance and tool-and-die plants. From an early stage in building what became the country's largest industrial conglomerate, Matarazzo constantly maintained a presence in the banking sector to ensure his firms' access to working capital.

The Francesse et Italiano was the largest foreign bank in Brazil, after it

became French-owned. For some years in the early 1920s, it was the largest bank in Brazil, after the Banco do Brasil (Table A.7). Its size reflected the combined markets that it served, of both merchants and Italian immigrant workers. Even so, its growth experience and financial structure, as demonstrated by the reserve and leverage ratios, were not substantively different from the norm of foreign banks. In contrast, prior to 1910, when the ownership transfer occurred, very high reserve ratios (70-95 percent) and leverage ratios (175-290 percent) could indicate a strongly personalized use of the bank. These ratios, significantly higher than the average for domestically owned publicly traded banks (Table A.1), document that the bank did not rely on deposits to fund its operations. By implication, the bank invested its large base of capital, relative to assets held as cash and credit, without the necessity of accommodating depositors' concerns. The change in ownership and management seemed to immediately restructure the bank's financial orientation toward that seen in the foreign banks.

In Rio Grande do Sul, the Banco Pelotense opened in 1906[40] as a commercial bank. (In an important experiment, its amended statutes in 1910 allowed the bank to extend mortgage credit; it did not do so to a significant extent.) The Pelotense was one of three substantial banks in Rio Grande do Sul. The other two major banks, prior to the opening of the Banco de Rio Grande do Sul in 1928, were the Banco da Província de Rio Grande do Sul and the Banco de Comércio. These three firms held 70 percent of riograndense bank deposits in 1927, immediately prior to the formation of the state-owned bank. Lagemann finds that the two older banks, located in the town of Porto Alegre, confined their businesses to traditional commercial relationships. By contrast, in Pelotas, the Pelotense was heavily involved in ranching and the production of jerked beef, as those activities became more highly commercialized during the early twentieth century. The bank participated in the expansion of refrigerated shipping (with *frigoríficos*) to enable the export of beef to Europe. And, it extended the geographic reach of banking in the south away from the established commercial center of Porto Alegre. The Pelotense had highly concentrated ownership and management. One hundred and forty-three shareholders founded the bank; only five individuals initially held one-half of the shares.[41] Through the remainder of the First Republic, only eight shareholders served as directors; and with minor exceptions the economic interests of the directors were concentrated in cattle ranching and processing.

The Pelotense quickly became large. By the mid-1910s, it was among the five largest (excluding the Banco do Brasil, Table A.7). The bank was also notable for its practice of maintaining very low reserves, by Brazilian standards of the time. From 1910, the bank consistently maintained less than 20 percent of its deposits as cash. In the high growth years of 1919 and 1920, its reserve ratio was 11 percent, and in the recessionary years of 1929 and 1930, when other banks aggressively increased their holdings of cash, the Pelotense's declined. During the 1910s and 1920s, the bank established a branch system throughout the state. Based on the geographic distribution of credit and deposits by branch, Lagemann concludes that the Pelotense served to transfer resources from traditional to newer ranching interests.[42] By unexplained arrangements, the bank also established the first interstate branches of a privately owned domestic bank.[43] The bank located its out-of-state branches in ranching areas. The Pelotense had the shortest life of these banks. The bank failed in 1931, during the Depression (although Lagemann specifically does not attribute the failure to the Depression[44]) and within four years of the state government's opening the Banco do Rio Grande do Sul.[45] It appears that the Pelotense failed when the state treasury transferred deposits to the Banco de Rio Grande do Sul in a move that had the political support of Getúlio Vargas as he was establishing the "revolutionary" government.[46] Since the Pelotense was the only bank in which the state government had placed deposits that failed (from among all three of the large riograndense organizations), its experience may indicate the continuing importance of maintaining reserves of cash to protect against rapid withdrawals.

More successfully, in the Federal District (the city of Rio de Janeiro), a group of Portuguese immigrant merchants and industrialists combined their capital to form the Banco Português do Brasil in 1918 (merged into Banco Itaú in 1973).[47] The original investors included important business names in Rio de Janeiro, such as its first president, the Visconde de Moraes (real estate development and industrial ceramics), Zeferino de Oliveira (textiles, candles, soap, and beer), and the Sotto Maior family (textiles, import/export). The bank's original statutes specified the bank's intent to service the Luso-Brazilian community and to serve the economic and financial interests of both Portugal and Brazil.[48] Almost immediately upon opening, the bank replaced an older Portuguese organization, the Banco Nacional Ultramarino, as the organ through which immigrant workers remitted funds to their families in Portugal.

The Português do Brasil was somewhat different from other banks in its widely distributed share ownership. Within its first year of operation, the bank's stock registered 529 Brazilian owners, representing 73 percent of its capital. Portuguese shareholders controlled the remainder. The five largest shareholders owned 22 percent of the firm. Even with its diversified ownership, the bank's activities seemed directed toward the business interests of its major shareholders. The Português do Brasil was also unusual in that its 1919 amended statutes and capital increase specifically allowed for the bank to extend long-term credit. Although this provision was seldom used, Marques finds an instance of the bank extending long-term credit to the Companhia Fiação e Tecidos Corcovado (a textiles firm, owned by one of the bank's major shareholders, the Sotto Maior family). In 1920, the major shareholders also used the bank as a conduit for investment in the Empresa Melhoramentos da Baixada Fluminense (a waterworks company in the lowland suburban area surrounding the city of Rio de Janeiro), a major recipient of federal financing for urban improvement. The Empresa Melhoramentos' eight largest shareholders, accounting for 77 percent of its capital, were the major investors of the Português do Brasil, including the Visconde de Moraes and five individuals or companies of the Sotto Maior family. Further, the Português do Brasil was an important creditor to the Manufatura Nacional de Porcelanas (industrial ceramics); the Visconde de Moraes was president of both organizations. Both the Melhoramentos da Baixada and Porcelanas became unprofitable activities for the bank; and, according to the bank's own analysis, they significantly contributed to severe difficulties it suffered during the Depression years.[49]

Although the Português do Brasil served the specific needs of its directors and owners, its financial structure was unremarkable. The growth pattern and liquidity and leverage ratios of the bank were not significantly different from the average experience of privately owned domestic banks. The bank became large and important, but during the First Republic it was not among the largest in Brazil.[50] The use of deposits to fund directors' other business initiatives did not cause the Português do Brasil to compromise its business structure; the conservative financial structure, while supporting new entrepreneurial investment, appeared in line with other organizations.[51]

Banco Boavista became publicly listed on the Bolsa de Valores in 1924, when two established Rio de Janeiro business names, the Guinle family and Alberto Teixeira Boavista, combined their interests.[52] The Guinles were established merchants, hoteliers, and textile manufacturers.[53] Boavista was a professional banker. He learned banking through his work experience with the Banque Francesse et Italiano before opening his eponymous *casa bancária.* In 1922, Alberto Boavista was instrumental in the founding of the Associação Bancária de Rio de Janeiro, and in 1931 he became a director of the Banco do Brasil. A Portuguese immigrant, the Barão de Saavedra, was the third participant in the Casa Bancária Boavista. In 1927 the three investors recapitalized the *casa bancária,* raising its capital from 4 contos to 15,000 contos (approximately U.S.$1.7 million). In order to raise the capital, the Guinle family sold its electric company, Companhia Brasileira de Energia Elétrica, to the Canadian Traction, Light, and Power Company.[54] Initially, 93 owners held Boavista stock; the Guinle family owned 62 percent of the firm and the nine largest shareholders controlled 93 percent of the stock. Boavista was one of the few banks to raise funding by issuing long-term bonds. Therefore, its shareholders were able to raise capital without divesting their control of the firm. Interestingly, Marques finds an absence of direct relations between Banco Boavista and the nonbanking firms of the original shareholders.[55]

In manners similar to these specific examples of the new domestic banks, foreign banks responded to the circumstances of both international financial circumstances and to economic conditions within Brazil. As mentioned earlier, the French Banque Francesse et Italiano assumed the portfolio of Matarazzo's Commerciale Italiano, and it became a major lender to coffee planters.[56] This bank became very large after its transfer in 1910. For some years during the 1910s and 1920s, it was among the five largest privately owned banks, measured by deposits. With a different business emphasis, another French financial interest, Crédit Foncier, became a major investor/manager in state-subsidized banks before states became majority owners of the firms. Notably, Crédit Foncier provided the original capital and management personnel for the Banco de Crédito Hypothecário e Agrícola de São Paulo before its conversion to Banespa.

However, the more typical mode by which foreign banks entered Brazil in the 1910s was to follow commerce and other businesses from their country of origin.[57] By the end of World War I, the diminution of the early importance of British banks and the dynamic interaction between banks of other national origins and Brazilian had become obvious.[58] The entry of foreign banks of a wide variety of national origins was one consequence of the changes in financial techniques and the national distribution of capital investment that followed World War I.[59] During the 1910s and early 1920s, Brazilian commerce experienced a notable expansion of foreign banks of diverse origins. At least nine foreign banks opened offices in Rio de Janeiro or São Paulo: two new German bank names appeared in 1911 (Allemão Transatlântico and Deutsch Sudamerikansche[60]); two U.S. banks (First National City of New York in 1915 and the American Banking Corporation, which opened in 1919 and was acquired by First National City in 1921); Español y Rio de la Plata in 1909; Hollandez-America do Sul in 1917; the Norwegian Banking Amalgamation in 1918; Royal Bank of Canada in 1919; and Yokohama Bank in 1923. They initially built their business and sectoral interests around nationally defined client bases. Once chartered, laws, regulation, and taxation did not consider foreign banks differently from their local counterparts.[61] Although not all of these organizations had long or successful lives, they increased the sense of competition and dynamism for commercial banking during the 1910s and early 1920s. Those foreign banks that remained diversified their activities to clients and businesses far removed from their national roots as they became more deeply implanted within the local business culture.

The appearance of these foreign and domestic organizations crystallizes many of the salient points of banking, from the perspective of the entrepreneur. Although many of the domestic organizations developed a large and diversified base of shareholders,[62] a small group of original investors often controlled their management and business focus. The formation of the domestic banks explored here brought together small, cohesive groups of investor/managers with interests in wide-ranging endeavors. As Comind and Boavista exemplified, informal unlimited-liability partnerships often converted their structures to joint-stock limited-liability organizations, as they grew in size and diversity of operations. The new legal structure reflected the *casa bancária*'s increasing scope, as well as the associated need for capital and formal business structure.[63]

The investor groups that combined to open these banks defied the stereotypes offered by existing historiography. The Português do Brasil was the only one of this group to have a well-defined immigrant focus; original investors of the others combined immigrant and native Brazilians. Commonly, banks combined "old" with "new" family elites, and they meshed "foreign" with "domestic." Of the bank-forming entrepreneurs involved with these organizations, only one (Boavista) concentrated his business activities primarily in banking. Clearly, it would be misleading to consider the formation of banking elites. Bankers, elite and otherwise, were businessmen with diversified interests, trying to rationalize their commercial operations. In doing so, the banks offered an organizational linkage that connected the interests of diverse economic sectors.

Often, these new banks were responding to the needs of emerging economic agents and interests, whether the recent entry of multinational companies or immigrants or the modernization of economic activity (such as water supply or construction companies). The Pelotense was the only bank with an, apparently, sharply defined sectoral focus; its commitment to livestock targeted technological advances that extended the geographic reach of markets. As the circumstances of the new domestic banks highlighted, banks offered important sectoral diversification of their holdings to investors.[64] With the exception of Boavista and (perhaps) Pelotense, the banks and the other enterprises of the initial investors were explicitly interrelated, through both interlocking directorships and their credit portfolios.[65] Most interpretations of interlocking relationships between banks and other enterprises focus on the outcome of "insider lending," narrowing the pool of creditors to small and closed groups of investors who combined their funds in order to borrow from themselves.[66] From the investors' perspective, organizing as joint-stock limited-liability banks constrained their risk of losses (in the bank) to the value of their investment; they did not risk the full amount of their personal wealth in the event of the organization's failure. Joint-stock organization also offered the possibility of capital accumulation from a wider pool of small-scale investors, who otherwise had limited investment alternatives. Therefore, banks allowed individuals to diversify their investments through the mechanisms of accumulating and allocating (shared) resources in a manner that both enlarged the pool of resources and limited their exposure to failure. Comind, the Português do Brasil, and Boavista offer clear examples of bank portfolios safely linked to their founders' business endeavors during the First Republic.

From the perspective of the increasing pool of prospective borrowers, the predominantly short-term nature of credit limited the scope of operations for which they could use banks. Some entrepreneurs were critical of this limitation. Roberto Simonsen (who also held significant banking interests in Comind and a regional paulista bank) was the most influential and vocal, but ultimately unsuccessful, critic of banking's short-term horizon and its inability to extend long-term credit:

> Our banking apparatus does not favor the financing of production, as we need. Composed of deposit banks, by their nature they cannot employ their cash for the long term. In circumstances of crisis, the deposit banks are the first to suffer and they aggravate the commercial and production situation by the restrictions that they need to apply to their business. In the advanced countries there are merchant banks [*bancos de negocios*] and the public that finances production for the long term through the intermediation of stock markets [*mercados de valores*] where shares and short-term industrial and agricultural credit [*titulos de crédito mobiliário da indústria e da agricultura*] are placed.[67]

Even so, many of his counterparts appreciated that banks, by safely and increasingly supplying short-term finance for ongoing operations, freed an

accumulating portion of their wealth for innovative ventures.[68] During the early twentieth century, the banking system provided important opportunities to private-sector entrepreneurs to facilitate their business activities. Among the most important was the ability to diversify the scope of their business interests. Diversification often included investing in industrial manufacturing. By doing so, they facilitated both intersectoral transfers and risk minimization.

CONCLUSION

Throughout the First Republic the growth of banking reflected its increasingly dynamic interaction with the private productive sectors. From a low level of representation in the economy, banks grew more rapidly than the economy. The banking system supported overall growth and structural change. Because banking developed concurrently with significant industrialization, traditional historiography would support a presumption that the two processes were significantly intertwined. The direct evidence of a causal relationship between banking and industrialization suggests that the relationship manifested complicated dynamics. A more secure interpretation is that banking strongly supported a shift in the balance between economic sectors. Industrial manufacturing benefited from this process.

Both the empirical evidence on the banking system and the anecdotal evidence from individual organizations demonstrate the effective, if indirect, manners in which banks contributed to the fluid movement of resources between different sectors of production and reinforced growth. For entrepreneurs and investors, participating in bank ownership provided a number of advantages that served well within an economy experiencing significant structural shift. As investments, banks diversified the holdings of their owners in a manner that limited risk in new ventures. As borrowers, entrepreneurs took advantage of the fungible nature of money. They used banks to provide short-term working capital for their ongoing ventures, freeing resources for other endeavors and facilitating an increasing range of distribution. While historians tend to classify entrepreneurs by their sectoral interests, the entrepreneurs themselves did not do so. By the twentieth century, they exhibited strong tendencies for multisectoral diversification, with banking an integral component of their portfolios. Further, the financial infrastructure that banks created allowed investors to flexibly meet the requirements of an expanding volume of commercial transactions. One long-term result was to facilitate the exchange of a wider array of goods among an increasing proportion of the population. In this manner, banks contributed to building markets that functioned with increasing ease and for a widening array of participants.

The banking system's rapid growth was the result of two fundamental shifts that occurred simultaneously. Economic growth generated a larger volume of commercial transactions for which banks executed the financial exchange. In addition, the trend of financial deepening demonstrated the banking system's intermediation of a growing proportion of economic activity, by serving as an important mechanism by which investors used the profits of more mature businesses to develop activity in new sectors and enterprises. The growth and pattern of banking evolved with economic development and they fluctuated with changes in monetary conditions in predictable manners. The privately owned banking network and the process of industrialization were closely associated with each other. In many respects, privately owned banks in Brazil were similar to early banking systems found among some early industrializers. They limited their activities to conservative commercial banking, with closely held ownership among small groups of partners, and operated within small geographic markets. Private-sector organizations organized funds on a relatively small scale.

However, the Brazilian banking system also demonstrated an important difference from the model of early industrializers. Despite the substantial evidence of strong growth and increasingly firm connections with the productive sectors of the economy, the empirical relationship between banking and other aspects of the economy depicted in Figure 5.1 raises an important question. Although the private-sector banks accounted for an increasing share of the system until the early 1920s, the public sector (through both the Banco do Brasil and, beginning in the 1920s, state banks) exerted countervailing influence within the private system. Their growth trends (Chapter 4) and the economic dynamics associated with their growth (Table 5.2) reflected fundamentally different behavior. Divergent growth trends between the private banks and the public-sector organizations began with the 1921 Banco do Brasil rediscount program and became attenuated in 1928, with the vast expansion and transfer of ownership at one organization, Banespa. In addition, as large-scale entrepreneurial managers, public banks set the stage for a dichotomized system, dominated by a few large-scale organizations, with many smaller banks in less prominent positions.[69] These experiences highlight the need to explore the role and effects of the public-sector banks. They also suggest the need to identify activities not met by private banks, and thus, filled by the public sector.

The successful maturing and increased stability of the banking system

after its reorganization in 1906 allowed for its growth and entrenchment as a viable economic force. Nevertheless, the contributions of the banking system did not develop easily; throughout the First Republic they continued to face limits in the extent to which they could facilitate growth and development. Further, compared to those in other economies, Brazilian banks intermediated a small share of financial resources. Therefore, despite the rational and rapid manner in which the banking system evolved and despite its contribution to efficiency, questions arise about important structural factors that may have limited the scope of its effects. Two approaches address these questions in the following chapters. The next chapter explores the means of and limits to banking's development, by focusing on the character and evolution of institutional factors that affected the development of the banking system. Then, Chapter 7 examines the limitations and opportunities deriving from regional factors and the effect of state governments on banking.

Appendix: Model of Demand and Supply of Banking

In order to determine the relationship between the banking system and the real (the nonfinancial) economy, Chapter 5 presents results from a very simple model to estimate demand and supply functions for changes in the real (adjusted for price-level changes) volume of bank deposits.[1] The bases for this model are the elementary principles of economic theory that supply and demand are (different) functions of quantity and price, and that the supply of real deposits equals their demand. Changes in the demand for real bank deposits can be expressed as the result of changes in income (quantity) and interest rates (price). Fluctuations of income, measured as the annual change of output, are expected to result in changes in the demand for real deposits in the same direction. The rate of change in the price level approximates the effect of deposit price change (in preference to the limited interest rate data that are available). The demand for real deposits is expected to be inversely related to prices. As its price increases, the demand for money, in the form of deposits, should decline. Idle funds on deposit in banks carry an increased opportunity cost to depositors as interest rates increase and alternative investments earn higher returns. That is, as prices increase, depositors are expected to direct funds toward uses more profitable than bank deposits. Reduced borrowing is an important use of funds during periods of increasing interest rates since interest rates for deposits change less and more slowly than loan rates. Obviously, in a scenario of declining prices (and interest rates), the inverse dynamics are expected to hold, with the result of increased demand for bank deposits.

Further, the model hypothesizes that the fluctuation of the supply of real bank deposits is a positive function of their price, reflecting the benefit to banks of increasing size as interest rates increase. An increasing deposit base translates into higher profits during periods of rising prices for money, again assuming that the cost of attracting deposits increases less than the interest rate that can be earned on credit. The fluctuation of bank cash balances should also move in the same direction as deposits since banks hold cash reserves primarily in order to redeem deposits. These concepts can be specified as:[2]

$$Dep_D = \alpha_1 + \beta_1 Y + \beta_2 P \qquad \beta_1 > 0;\ \beta_2 < 0 \qquad \text{(Equation 1)}$$
$$Dep_S = \alpha_2 + \beta_3 C + \beta_4 P \qquad \beta_3 > 0;\ \beta_4 > 0 \qquad \text{(Equation 2)}$$
$$Dep_D = Dep_S.$$

where: Dep_D = demand for real bank deposits, annual rate of change
Dep_S = supply of real bank deposits, annual rate of change
Y = output, annual rate of change
P = prices, annual rate of change
C = real cash balances, annual rate of change

The demand side is of most interest for questions about the relationship between the productive economy and the banking system. Therefore, this model is most useful for estimating the demand of deposits.

An advantage of this specification is that it allows for a certain amount of disaggregation. The model measures the responsiveness of the total banking system to major overall economic variables. Since output and price indices for the industrial and agricultural sectors are available, the model can also test whether the banking system responds more strongly to one sector or the other.[3] This provides a succinct test for hypotheses of the relationship between banking and industrialization. In addition, the bank data can be disaggregated by various geographic and structural features, and the model can be used to test whether banks with certain characteristics were more or less responsive to different economic variables.

This model of the banking system also has some drawbacks that need to be recognized when assessing its results. The first is its simplicity. In an economy with price fluctuation as rapid and severe as that experienced during the First Republic, both experience and economic theory support the expectation that prices and nominal interest rates moved together, and that fluctuations in prior years would have little effect on the current year, or on price expectations for the current year. The rate of price change reflects fluctuation of nominal interest rates (as compared to real interest rates); therefore, the rate of price fluctuation captures the change in the opportunity cost of holding deposits. Further, the model incorporates only

three variables: income, prices, and cash balances. A wide variety of exogenous variables may be missing from the model that could be important in explaining the growth of the banking system. The statistics that measure the reliability of the regression statements can reveal whether variables are missing, but they do not identify what those variables are. Some likely factors not included in the equations are the requirements of international debt servicing and international trade and the funding policies of the state and federal governments. Another drawback of this model is that it assumes that the direction of causation is from the economy to the banking system. This model specifies the growth of banking as a result of economic change. It does not take into account the likelihood of two-way causation. That is, growth of the banking system could have an effect on the fluctuation of output or prices. While the regression statements measure the statistical relationship between the variables, it should be recognized that causation probably ran in both directions.

The model is a set of two simultaneous equations (Equations 1 and 2) that estimate the same variable, the change in the volume of real deposits. One independent variable, prices, appears in both equations. Because of the simultaneity problem, the two statements cannot be estimated independently of each other. I have solved these equations by using two-stage least squares estimation[4]; and price-level changes are determined endogenously in the first stage. The statistical integrity of the results for the model is sufficient that they can be usefully analyzed. In most instances, the results are statistically valid.[5] The comparison of when these regressions generate statistically significant information (and when they do not) also reveals useful findings. The directions of correlation are as expected (with the important exceptions of the functions using agricultural output to estimate deposits and when the population measured was the Banco do Brasil). The indices providing the information for the sectoral and total growth rates (the input data for the regressions) are in Table A.11; Tables A.13a and A.13b show the full set of estimated demand and supply functions, respectively, for the change in the volume of bank deposits.[6]