

## FREE-BANKING AND FINANCIAL STABILITY IN PERU

LUIS FELIPE ZEGARRA

*ABSTRACT:* The theory of free banking establishes that free competition in note issue decreases the probability of financial instability and currency depreciation. This article analyzes the Peruvian experience between 1862 and 1878 and shows that, consistent with the theory, free banking did not lead to financial instability. On the contrary, government intervention in the banking sector contributed to the expansion of paper money and to the decline in the ability of banks to face the demand for specie.

*KEYWORDS:* monetary theory, free banking, Latin America, Peru

*JEL CLASSIFICATION:* E4, G21, N26

---

Luis Zegarra (lfzegarrab@pucp.edu.pe) is Professor at the CENTRUM Católica, The Business School of the Pontificia Universidad Católica del Perú. I am indebted to Professors Kenneth Sokoloff, Jean-Laurent Rosenthal and Naomi Lamoreaux for their support and advice. I thank the participants in the All-UC Economic History Workshop for Graduate Students, the 10th Annual Meeting of LACEA, the UCLA-Von Grep Workshop in the History of Entrepreneurship, and the UCLA-Proseminar of Economic History, for their support, ideas and criticism. Financial support has been provided by Kenneth Sokoloff, the UCLA Department of Economics, the Economic History Association, the All-UC Economic History Group, the Latin American and Caribbean Economic Association-LACEA, the UCLA-Latin American Center, the UCLA-Global Fellows Program, and the Institute for Humane Studies.

## INTRODUCTION

From the publication of *The Denationalization of Money* in 1974 by Friedrich Hayek, the academic debate on the private issue of money regained vitality.<sup>1</sup> Several theoretical and empirical studies followed this important contribution.<sup>2</sup> In theory, a free banking system grants banks the right to issue banknotes and engage in any other type of banking operation under no special regulation. Competing issuing institutions provide an optimal amount of banknotes, which depends on specie inflows and outflows and the demand for money. Free banks can receive large profits if they “produce” a stable currency. Banks then do not have the incentive to issue excessively: if they do so, their notes would depreciate against other currencies.<sup>3</sup> The historical experience of several economies has been very useful for determining whether the theory of free banking fits the reality. Several studies have analyzed the cases of the United States, Scotland and other countries, showing that the experience of free banking was quite positive in terms of financial stability and currency stability.<sup>4</sup>

---

<sup>1</sup> In the 19<sup>th</sup> century, in several countries economists and policy-makers argued that privately-owned banks could provide a stable currency and that the State should not intervene in the production of paper money. The political debate was clearly won by those who proposed a State monopoly in the creation of money. Government-sponsored central banks were then created all over the world. That the issue of money should be a government monopoly is still widely accepted by probably most economists. It is a strong belief that government-sponsored central banks are the only institutions capable of providing a means of payment in limited quantities. In the minds of many economists, free competition in issue is almost surely a cause for financial instability and currency depreciation. Many economists also consider that without government regulation privately owned banks may allocate funds into too-risky projects, increasing the probability of defaults, financial runs and economic collapse. A financial system with minimum public financial regulation, free barriers to entry, few restrictions to the issue of money and the absence of government-sponsored central banks and lenders of last resort seems (in their minds) to be naturally unstable. It will then be reasonable for governments to supervise financial systems, oversee financial operations, secure deposits and lend funds as last resort to those banks with liquidity problems, since by doing so governments would avert financial runs and systemic collapse.

<sup>2</sup> Even though nowadays most economists still do not accept that a free banking system may be socially efficient, free banking has gained ground with the contributions of Lawrence H. White, George Selgin and Kevin Dowd.

<sup>3</sup> Several authors argue that banks would limit the production of money when faced with the possibility of depreciation (Hayek, 1990, pp. 51–52; Dowd, 1996, p. 681; Selgin, 1988, pp. 147–149; White, 1989, pp. 29–34)

<sup>4</sup> A large number of historical cases show that free banking did not lead to financial crises and currency depreciation, and that on the contrary the government

This article analyzes the experience of free banking in Peru in the 1860s and 1870s. The case of Peru is interesting because it was the most liberal free banking system in Latin America during more than a decade, and probably one of the most liberal systems around the world. In this country, banks could freely operate as any corporation and could even issue as much paper money as they considered necessary or convenient without special capital or specie requirements. Banks of issue and discount operated under this liberal legislation from 1862. In 1873, however, the Peruvian government started a process of intervention in the banking system which led to the suspension of payments in 1875, the rescue of some banks of issue by the national government in 1877, and the prohibition of bank note issue in 1879.

This article relies on primary and secondary sources. Primary sources include banks' balance sheets published by the newspaper *El Comercio*, and contemporary official and non-official documents. By looking at primary and secondary sources, the study shows that a free banking system in Peru did not lead to the collapse of the financial system. On the contrary, banks attempted to maintain the value of their banknotes. It was when the government intervened in the banking sector, regulating the issue of banknotes, that banks lost the capacity to redeem their banknotes. It was the government intervention the main cause for the depreciation of the paper money.

---

intervention in the banking business contributed to financial instability. In those countries that adopted free banking regimes, financial systems were thought to be relatively stable and successful, in the sense that wildcat banking was not widespread, due to in part to redemption, reputation, and the public and private restrictions on risk taking that limited the degree of adverse selection (Gorton, 1996). Rockoff (1974), for example, argues that wildcat banking in the 19<sup>th</sup> century U.S. free banking states was confined to a small number of episodes, and that although the free entry condition facilitated wildcat banking, an ineffective design of the bond security provision and some specific public regulations made it profitable. United States banks were safe during the periods before and after the Civil War (Dowd, 1992) and corresponding losses very low (Kaufman, 1988). In other countries, the experience on free banking was also positive. Scotland, for example, was under free banking in the 18<sup>th</sup> and early 19<sup>th</sup> centuries. Free banking in this country also provided a relatively stable currency and did not increase the probability of bank runs (White, 1995). Latin America, however, also provides useful experience for testing the theory of free banking. In Chile, for example, the Law of Banks of Discount of 1860 allowed banks to issue banknotes under very low restrictions. In Colombia, states chartered banks in the 1870s under very liberal legal systems. These two countries did not face bank runs or a financial collapse. On the contrary, the deterioration of the currency value in those two countries was caused by the increasing intervention of the government in banking affairs.

The structure of the paper is as follows. Section 1 analyzes the pure free banking system. Section 2 analyzes the final years of the pure free banking system. Section 3 analyzes the effects of the increasing government regulation in the banking sector between 1873 and 1875. Section 4 discusses the effects of the suspension of payments in 1875. Section 5 concludes the article. The appendix discusses the data sources.

## 1. THE PURE FREE BANKING PERIOD: THE FIRST YEARS

The Peruvian economy entered into a period of expansion in the late 1840s, largely due to a boom in guano production. After around two decades of commercial stagnation, exports increased from 4.8 million soles in 1845 to 7.5 million Peruvian soles in 1851, and 35 million soles in 1860.<sup>5</sup> The rapid growth of exports largely followed the evolution of exports of guano, the main export product of Peru in the mid-19<sup>th</sup> century: total guano exports increased from 578,000 tons in 1846–1850 to 1.7 million tons in 1851–1855 and 1.9 million tons in 1856–1860. Exports then slightly declined to 1.8 million tons in 1861–1865.<sup>6</sup> The Peruvian government benefited from the guano boom. Guano was property of the State and therefore the guano boom from the late 1840s had a positive impact on fiscal revenues, which increased from 7.7 million soles in 1850 to 21 million soles in 1860.

Specie flowed into the Peruvian economy as a result of the boom. In 1861, for example, the economy had a trade surplus of 22 million soles, and the government only spent 3.4 million soles for interest and amortization on foreign loans. In the following years, the economy continued receiving a net inflow of specie. In 1863, for example, the trade balance was 20 million soles, whereas public expenditures on foreign debt (interests and amortization) reached 5.5 million soles.

---

<sup>5</sup> See the appendix for a description of the Peruvian sol and the currency system of the period.

<sup>6</sup> At the time, guano was highly prized because modern synthetic fertilizers had not been yet invented. In addition, agricultural exports also experienced an interesting dynamism in the 1860s. Sugar exports, for example, increased from 3.8 million tons in 1856–1860 to 8.1 million tons in 1861–1865, whereas cotton exports declined from 2.1 million tons in 1856–1860 to 1.6 million tons in 1861–1865.

**Table 1. The Peruvian Economy, 1840–75**

Foreign commerce	1840	1845	1850	1855	1860	1865	1870	1875
Exports (million of soles)	5.21	4.80	7.57	10.31	35.00	25.68	21.00	19.00
Imports (million of soles)	4.68	5.10	6.00	9.01	15.00	15.00	12.00	16.00
Trade balance (million of soles)	0.53	-0.30	1.57	1.30	20.00	10.68	9.00	3.00
Trade balance (% GDP)	0.7%	-0.4%	1.6%	1.1%	16.5%	7.2%	4.9%	1.8%
Fiscal accounts	1840	1845	1850	1855	1860	1865	1870	1875
Public revenues (million of soles)			7.76	14.47	21.05	16.98	47.53	34.21
Public spending (million of soles)			5.69	13.17	21.12	21.59	78.32	56.66
Fiscal balance (million of soles)			2.07	1.30	-0.07	-4.61	-30.79	-22.45
Fiscal balance (% GDP)			2.1%	1.1%	-0.1%	-3.1%	-16.6%	-13.7%
Public debt (million of soles)			14.17	51.51	33.48	38.65	98.55	241.81
Public debt (% GDP)			14.3%	42.4%	27.6%	26.1%	53.3%	147.4%
Banking sector	1840	1845	1850	1855	1860	1865	1870	1875
Credit (million of soles)	0.00	0.00	0.00	0.00	0.00	5.45	12.99	26.81
Credit (% GDP)	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	7.0%	16.3%
Deposits (million of soles)	0.00	0.00	0.00	0.00	0.00	2.15	8.95	11.06
Deposits (% GDP)	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	4.8%	6.7%
Banknotes in circulation (million of soles)	0.00	0.00	0.00	0.00	0.00	3.37	5.27	11.38
Banknotes in circulation (% GDP)	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	2.9%	6.9%
GDP	1840	1845	1850	1855	1860	1865	1870	1875
Real GDP (1830=100)	125.69	142.31	158.47	181.44	189.20	207.34	257.08	249.66
Estimated nominal GDP (million of soles)	78.37	84.26	99.01	121.53	121.38	148.11	185.01	164.06
	1840-45	1845-50	1850-55	1855-60	1860-65	1865-70	1870-75	
Annual growth rates of real GDP		2.5%	2.2%	2.7%	0.8%	1.8%	4.4%	-0.6%

Notes: Figures in soles are in silver soles. For more on monetary units, see data appendix. The sources are Mitchell (1993) for foreign commerce. Original figures on foreign trade are in pesos (1840-60) and soles (1865-75). Exports and imports for 1840, 1850, 1855 and 1865 were estimated using interpolation. The figures on revenues and spending refer to actual revenues and spending and come from Tantalean (1983). Revenues do not include loans. Information on public debt comes from Tantalean (1983). Information on credit, deposits, and banknotes comes from banks' balance sheets. Credit includes direct credit to the government. The source for real GDP is Seminario, Alva and Ponce (2010). Those figures are in constant dollars of 2000. I then converted those figures in current soles as explained in the Appendix.

It was in this period of economic expansion and inflow of specie that the first bank was created in Peru. The Banco de la Providencia started operations by the end of 1862. Other banks were created in the following years. For several years, banks were not subject to any specific banking legislation: until 1873 banks were only subject to the commercial legislation. The Commercial Code of 1852 regulated the formation and operations of joint stock companies; corporate banks were then subject to the general commercial legislation. This legislation was very liberal. In fact, corporations (including corporate banks) did not require a special charter to operate, did not have to meet capital or reserve requirements and did not face government supervision; corporations only had to be registered in the Commercial Tribunal (*Tribunal de Comercio*) of the city in which they operated. Banks could even issue any amount of banknotes without a special supervision or restriction; also, the government did not levy any taxes upon banking operations and the issue of banknotes, and did not discriminate against foreign banks (Joslin, 1963).<sup>7</sup>

The Banco de la Providencia was created by leading merchants of Lima, and was intended to include a pawnshop or *monte de piedad*, a savings bank, an insurance company and a bank of deposits and current accounts.<sup>8</sup> Soon after its creation, this bank also issued banknotes. As Dancuart (1905) indicated, “although it was not expressed in its by-laws that it would issue banknotes, perhaps because it [the bank] believed that it was in its right [to issue banknotes] as several commercial houses had been doing for some time, what it is evident is that the bank ‘La Providencia’ immediately made an issue of banknotes of five pesos, to which the public received most favorably.”<sup>9</sup> By December 1865, there were 1.12

---

<sup>7</sup> Joslin (1963) indicates that the government promised the directors of the Bank of London that the bank “would share fully and equally in any privileges granted to any other bank.” (p. 88)

<sup>8</sup> The important merchants that created this bank were Francisco Quiroz, Miguel Medina, Enrique Higinson, Francisco Rey, Manuel Amunátegui, Juan Faower, José Canevaro, Joaquín Soroa, Francisco Bryce and Francisco Watteau.

<sup>9</sup> Dancuart (1905), vol. VII, p. 42. The original text is “Aunque no se expresaba en su programa que emitiría billetes, tal vez porque se creyó en su derecho al igual del que venían ejerciendo hacía algún tiempo varias casas de comercio, lo evidente fue que el Banco “La Providencia” hizo inmediatamente una emisión de billetes de a 5 pesos, a los que el público dio la más favorable aceptación.”

million soles in banknotes in circulation issued by this bank; those banknotes accounted for almost one-third of its total liabilities.<sup>10</sup>

As the operations of the Banco de la Providencia were successful for the shareholders, other banks were also created.<sup>11</sup> In 1863, the Banco del Perú started operations. This bank, founded by eight renowned capitalists,<sup>12</sup> engaged in a wide range of operations, including discounting commercial notes, opening current accounts, accepting deposits, and even issuing banknotes. According to Dancuart (1905), the Banco del Perú's banknotes were widely accepted by the public.<sup>13</sup> Also in 1863, the Bank of London, Mexico and South America (an English bank) opened a branch in Lima, and also engaged in the issue of banknotes.<sup>14</sup>

The creation of these banks increased the supply of funds and reduced short-term interest rates (Quiroz, 1989). Prior to 1850, for example, interest rates for short-term loans ranged between 24% and 36% per year. By 1857 interest rates ranged between 12% and 18% per year. By 1862, however, banks offered discounts with rates between 8% and 12% (Camprubí, 1968).<sup>15</sup>

Other banks were created in the following years. The Banco de Lima was created in 1869. Three years later, the Banco Nacional del Perú and Banco Garantizador started operations. The Banco Anglo-Peruano opened in 1873. Banks were also created outside the city of Lima. The Banco de Trujillo, which operated in the city of Trujillo in the Northern coast of Peru, was created in 1871. The

---

<sup>10</sup> The capital was two million pesos.

<sup>11</sup> García Calderón (1949) indicates that this bank made large profits. Other banks also made significant profits, which generated an incentive for the government to participate in the creation of the Banco Nacional, an unsuccessful attempt.

<sup>12</sup> They were José Sevilla, Emilio Althaus, Felipe Gordillo, José Canevaro, Micerno Espantoso, Felipe Barreda, Manuel Pardo and Nicolás Rodrigo.

<sup>13</sup> Dancuart (1905), vol. VII, p. 41. Two years later, a new corporation was created, under the same name of Banco del Perú, absorbing the assets and liabilities of the original bank.

<sup>14</sup> Dowd (1992) indicates that this British bank had a prominent role in Peru.

<sup>15</sup> Some of these banks even provided medium-term loans and charged around 13% per year. As Zegarra (2013) shows, Banco de Lima made loans secured with urban and rural estates in the late 1860s and early 1870s, charging an interest rate of 1% per month.

Banco de Arequipa, the Banco de Tacna, the Banco de Piura and the Banco de Emisión del Cerro started operations in 1872, operating in the cities of Arequipa, Piura and Cerro de Pasco, respectively. One year later, the Banco de Ascope, from Trujillo, also opened to the public. By 1873 there were twelve banks in the entire country.<sup>16</sup>

The phenomenon of regional banking was important for Peru. Subject to liberal legislation, Lima's banks could open offices in any city (there were no branch restrictions), and regional banks could issue banknotes to satisfy the needs of credit of their clients. Regional banking did not have the same intensity until the 1950s, eighty years later (Quiroz, 1989).

---

<sup>16</sup> The legislation did not prohibit branching during this period. Several banks opened branches in several cities of Peru. In the 1860s, for example, Bank of London, Mexico and South America had offices not only in Lima but also in Callao and Iquique. In the 1870s Banco de Arequipa had offices in Arequipa, Puno and Cuzco (Camprubí, 1957, p. 100).



**Table 2. The Banking Sector, 1862–83**

List of banks	Main Branch	Initial capital (million soles)	Year of creation	Year of failure
Banco de la Providencia	Lima	0.5	1862	1880
Banco del Peru	Lima	1.0	1863	1880
Bank of London	Lima	1.0	1863	a/
Banco de Lima	Lima	3.2	1869	1878
Banco de Trujillo	Trujillo	0.5	1871	b/
Banco Nacional del Peru	Lima	12.0	1872	1880
Banco Garantizador	Lima	2.0	1872	1882
Banco de Arequipa	Arequipa	0.5	1872	b/
Banco de Piura	Piura	0.5	1872	b/
Banco de Tacna	Tacna	0.5	1872	c/
Banco de Emision del Cerro	Cerro de Pasco	0.1	1872	b/
Banco Anglo Peruano	Lima	n.a.	1873	1876
Banco de Ascope	Trujillo	n.a.	1873	b/
Banco Mercantil del Peru	Lima	n.a.	1877	1880
Banco del Callao	Callao	0.5	1877	a/

Indicators on the size of the banking sector, 1874

Total capital: 38.7 million soles

Total credit: 27.9 million soles

Total deposits: 10.4 million soles

Total note issue: 9.1 million soles

Notes: The sources are Cambrubi (1957) for the dates of creation and the initial capital. The date of failure come from Camprubi (1957) and Guerra-Martinere (1996). Original figures on capital, credit, deposits and note issue are in soles and come from banks' balance sheets published in the newspaper *El Comercio*. Figures on capital, credit, deposits, and note issue are in silver soles.

a/ The Banco del Callao and the Bank of London merged in 1897 to form the Banco de Perú y Londres.

b/ These banks failed between 1879 and 1883.

c/ The Banco de Tacna continued in operations in Chile as the province of Tacna was taken by Chile after the War of the Pacific.

n.a.: Not available.

Banks could issue banknotes under no special government regulation.<sup>17</sup> However, banks and especially their banknotes were

<sup>17</sup> That there was no restriction on private issue is clear from several government statements. In 1873, for example, the Prefect of the Department of Lima requested the national government to forbid the circulation of small denomination currency.

accepted by the public. Dancuart (1906), for example, argued that “the public... favored them [the banks of issue] with unlimited confidence, accepting their banknotes redeemable on demand, without more guarantee than the signatures of their directors.”<sup>18</sup> In the case of the Bank of London, it seems that the notes issued by this bank “were accepted in preference to silver.”<sup>19</sup>

Over time, banking operations boomed and profits were significant. Vicuña (1867), for example, indicated that banks obtained a profit rate of 70% in 1867.<sup>20</sup> Joslin (1963) indicated that the Bank of London became profitable from the first year. “From the first the branch yielded a handsome profit. Deposits were attracted from wealthy and influential clients.... Encouraged by their success, the directors opened a second branch in the port of Callao, then a town of only 15,000 inhabitants, but doing a brisk trade. The expectations were then more than justified.”<sup>21</sup> The Banco de Lima also made substantial profits. This bank made profits for 327,425 soles in 1870, one year after its creation. Considering that the capital of this bank was 1.6 million soles, the profit rate was 20%. Shareholders then received dividends for 16% of their paid-in capital (Banco de Lima, 1871). Banks were indeed so profitable that the government tried to participate in the creation of a bank (García-Calderón, 1949).

One problem faced by the banking system was the suspension of payments by the Banco La Providencia in 1866. Two years after the suspension of payments, and after analyzing the events, the Board of Directors and Shareholders of the Banco de la Providencia indicated that Domingo Porras, the manager of the bank, had engaged in fraudulent operations, leading to a fall in the bank’s specie reserves (Banco de la Providencia, 1868). In February 1866 the fiscal auditors Mr. Lembecke and Mr. Roca-Garzón made an

---

The government, however, denied the request, indicating in the supreme decree of April 26 1873 that the State had no right in prohibiting the issue of those banknotes.

<sup>18</sup> Dancuart (1906) vol. VIII, p. 11. The original text is: “El público por su parte les favoreció con su ilimitada confianza, aceptando los billetes al portador, sin más garantía que la firma de sus directores.”

<sup>19</sup> Joslin (1963), p. 88.

<sup>20</sup> Vicuña (1867), cited by Tantaleán (2011).

<sup>21</sup> Joslin (1963), p. 88.

inventory of specie, banknotes and other assets in the vault of the bank. Among several documents, the auditors found four Treasury notes for a total amount of 230,189 pesos. Believing that these documents had the value they represented, the auditors tried to redeem them, but two of the documents had been protested, one by the Banco del Perú, and the other by the commercial house of Sesacau Valdeavellano. In addition, the cashier of the Treasury, instead of paying off the amounts of the other two documents, indicated that they also had no value because Porras had signed counter-documents for an equal amount. The vault also contained four commercial IOUs signed by Francisco Santolaya and J. J. Larrea for a total value of 98,850 pesos, and other four IOUs subscribed by Buenaño e Hijos and Francisco Ruiz for a total amount of 98,400 pesos. When the auditors attempted to redeem those commercial notes, they found out that the documents were false.<sup>22</sup>

After the liquidation and a loss to shareholders, however, the bank (and other banks) continued its operations normally (Elguera, 1906). In the following years, banknotes issued by the Banco de la Providencia and by other banks were accepted by the public at par. In his annual report to the Ordinary Legislature of 1868, Minister of Finance Juan Elguera indicated that the foundations of the banks of issue were solid: "They [banks] have gained the confidence of all classes of the society, who accepted their role not only without disgust, but with preference to the metal and enjoy, finally, all the credit that could be craved, and the confidence that their shareholders and managers inspire."<sup>23</sup>

---

<sup>22</sup> The official position of the government, as established by the Ministry of Hacienda Juan Elguera, was that the bank was forced to suspend its payments and settle in early 1866, because it apparently made risky loans.

<sup>23</sup> Elguera (1906), p. 146. The original text is:

Las bases de su fundación son sólidas; han obtenido la confianza de todas las clases de la sociedad, que aceptan su papel no solo sin repugnancia, sino con preferencia al metálico y gozan, en fin, de todo el crédito que pudiera apetecerse, por la seguridad y confianza que inspiran sus accionistas y gerentes.

Banks' profits were still significant. In annual period 1869–1870, for example, the Banco de la Providencia made 105,080 soles in profits. Considering that the capital was 1.6 million soles, the profit rate was 6.5% (Banco de la Providencia, 1870).

Not only the banknotes issued by banks of Lima, but also the banknotes issued by banks from other cities, were accepted by the public. As Dancuart (1907) indicated, the banks Nacional, Lima, Peru, La Providencia, London and Garantizador in Lima, and those established in Trujillo, Tacna, and Arequipa, issued increasing sums of banknotes that were from the start valued at par with specie, and that grew by a significant proportion compared to the banks' working capital. Those banknotes had several denominations. Banknotes had a value of one sol, two soles, four soles, five soles, ten soles, 20 soles, 50 soles, 100 soles and 500 soles. However, some denominations were for fractions of one sol, such as 20 and 40 cents.<sup>24</sup>

During this period Peruvians did not reach a consensus on the convenience of the unregulated private issue of banknotes. Some considered that the State should not regulate the issue of banknotes, because the public was wise enough to make rational decisions and to accept or reject those banknotes. Minister of Finance Ignacio Noboa y Benavides, for example, indicated in 1864 that

Reduced to its simplest expression, the act of issuing banknotes is nothing more than a pure trust agreement between the establishment that makes them available and the individual who receives them. As these documents are not forced circulation, whoever does not want to accept them, i.e., the person that does not have confidence in the establishment that issues them, will not take them. Thus, considered the issue in itself, there is nothing therein that authorizes to impede it; and the legislator who tries to impose a ban between the bank that offers a banknote and the individual who is willing to receive it, would proceed with as much arbitrariness and injustice as whoever intends to prohibit a promise or other any contract having in itself nothing immoral or contrary to the law.<sup>25</sup>

---

<sup>24</sup> The public even divided the smaller denomination banknotes when they were in need of smaller change (Dancuart, 1907).

<sup>25</sup> Noboa (1905), p. 262. The original text is:

Reducidos a su más simple expresión, el acto de emitir billetes no es más que un convenio de pura confianza entre el establecimiento que los pone en giro y el particular que los recibe. Como esos documentos no son de forzosa circulación, el que no quiera aceptarlos, es decir, el que no tenga confianza en el establecimiento que los emite, no los tomará. Así pues, considerada la emisión en sí misma, nada hay en ella que autorice a impedirla; y el legislador que intentase interponer una prohibición entre el banco que ofrece un billete y el particular que está dispuesto a recibirlo, procedería con tanta arbitrariedad

Similarly, Manuel Pardo, businessman, merchant, director of banks, Minister of Finance and eventually President of Peru (1872–1876), defended the benefits of a free-market banking sector, indicating that the State regulation of the banking industry should be limited. In particular, in 1867 Pardo indicated that

The banking industry, not only by principles but for the convenience for our emerging countries, should be free and should be exercised freely, because only freedom can impose on it [on the industry] through competition, which is its effect, the necessary rules and hold it within the established limits; that is, to force it to give money at low prices and to restrict enough the issue of each bank to inspire the public more confidence than its competitors. The duties of the high policing [function] that the government exercises should be limited to forcing banks to make a periodical publication of their situation, and verify that the validity of the published data was checked by the Commercial Tribunal of the department. Outside of that there will be nothing more than more or less capricious combinations in which the damages made to the banks are made to the trade itself, multiplied by a higher factor, the lower the chances of new partnerships that can play the vital role of the mercantile organism.... That banks have their dangers is indisputable. But the remedy is not but the prudent administration of those establishments and it will not be the regulations and laws where security will be born from.<sup>26</sup>

---

e injusticia, como el que pretendiera prohibir una promesa u otro cualquier contrato que en sí nada tuviese de inmoral o de contrario a la ley.

<sup>26</sup> Pardo (1867), pp. 67, 69–70. The original text is:

La industria de bancos, no sólo por principios sino por conveniencia para nuestros países nacientes, debe ser libre y debe ejercerse libremente, porque solamente la libertad puede imponerle con la competencia, que es su efecto, las reglas necesarias y sujetarla dentro de los límites establecidos; esto es, obligarla a dar dinero a bajo precio y a restringir la emisión de papel de cada banco lo necesario para inspirar al público más confianza que sus competidores. Los deberes de la alta policía que el gobierno ejerce debieran reducirse a obligar a los bancos a que hagan una publicación periódica de su situación, y a que la verdad de los datos publicados fuera comprobada por el Tribunal de Comercio del departamento. Fuera de eso no habrá más que combinaciones más o menos caprichosas en que los perjuicios hechos a los bancos son hechos al comercio mismo, multiplicados por un factor más elevado, cuanto menores son las probabilidades de nuevas asociaciones que puedan desempeñar esa función vital del organismo mercantil... Que los bancos tienen sus peligros es incuestionable. Pero el remedio no está en sino la administración prudente de esos establecimientos y no será de los reglamentos y de las leyes de donde nazca esa seguridad.

Others, however, indicated that the State should regulate the issue of banknotes. In 1868, Minister of Finance Juan Elguera, for example, recognized that the public freely accepted the banknotes issued by banks; but it was necessary to enact special legislation to regulate note issue. Elguera indicated that

[there was] a lack of authority in accordance with the laws, and lack of any control by the authority. Once filled this requirement, which will ensure the interests of the public in a solid manner, the well-deserved concept that these establishments have won will be consolidated in a permanent fashion, as it is craved, at the same time as the confidence in them will have no limits, since its operations will be carried out under the protection and guarantee of the authorities.<sup>27</sup>

However, although Minister Elguera, and others pushed for some regulation of note issue in the 1860s, they did not pursue the abolition of the system of privately-owned banks of issue. They simply argued that these banks could keep competing in note issue; but some regulation was required to avoid financial problems in the future.

As indicated by the balance sheets published by the banks in operation, banking operations, including the issue of banknotes, expanded over time. Total note issue of the Banco del Perú, for example, increased from 2.04 million soles in December 1865 to 2.95 million soles in March 1868 and 3.36 million soles in February 1869. Discounts of this bank increased from 1.89 million soles in December 1865 to 3.7 million soles in February 1869. Total note issue of the Bank of London also increased from 206,000 soles in December 1865 to 407,000 soles in December 1867 and 1.5 million soles in December 1870, whereas discounts increased from 810,000 soles in December 1865 to 1.6 million soles in December 1870.

---

<sup>27</sup> Elguera, Juan (1906), p. 146. The original text is:

...falta de autoridad con arreglo a las leyes, y la carencia de toda fiscalización por parte de la autoridad. Una vez llenado este requisito, que asegurará de un modo sólido los intereses del público, el bien merecido concepto que se han granjeado esos establecimientos, se consolidará de un modo permanente, como es de apetecerse, al mismo tiempo que la confianza en ellos no tendrá límites, desde que sus operaciones se practicarán bajo el amparo y garantía de las autoridades.

The increase in note issue in the 1860s is consistent with the fact that the Peruvian economy was experiencing an inflow of specie due to the large trade balances and fiscal surpluses. The inflow of specie allowed banks to accumulate reserves. Total cash of the Banco del Perú, for example, increased from 1.2 million soles in December 1865 to 1.9 million soles in February 1867 and 2 million soles in February 1869.<sup>28</sup> Total cash of the Bank of London increased from 525,000 soles in December 1865 to 1.4 million soles in December 1870.

## **2. DETERIORATION OF THE BALANCE OF PAYMENTS AND THE END OF PURE FREE BANKING**

The Peruvian economy went through a period of commercial stagnation in the late 1860s and early 1870s. Exports remained below 23 million soles between 1866 and 1875, after experiencing a steady growth in the late 1840s, in the 1850s and in the early 1860s. Guano exports slightly declined from 1.9 million tons in 1856–1860 to 1.8 million tons in 1861–1865, then increased to 2.6 million tons in 1866–1870, but declined to 2.1 million tons in 1871–1875. In addition, as guano revenues declined, public spending became much greater than public revenues. The government incurred a deficit of 4.6 million soles in 1865, 31 million soles in 1870 and 22 million soles in 1875.

The trade balance was still positive in the late 1860s and early 1870s, but it deteriorated over time: it declined from 12 million soles in 1867 to 9 million in 1870 and 6 million in 1873. In addition, public expenditures on interest and amortization of foreign loans exceeded the trade surplus: those expenditures increased from 3 million soles in 1867 to 22 million in 1870 and 33 million in 1873. Therefore, compared to the early 1860s, the inflow of specie probably declined in the late 1860s and early 1870s. It is even possible that the Peruvian economy was experiencing an outflow of specie.<sup>29</sup>

---

<sup>28</sup> Cash includes specie and banknotes issued by other banks stored in the vault of the bank.

<sup>29</sup> The government obtained two long-term foreign loans in 1866–1873: one for 59.6 million soles in 1870 and another for 75 million soles in 1873 (Contreras, 2012). This was equivalent to 17 million soles per year in 1866–1873.

As a result of the deterioration of the balance of payments, the banks of issue had to reduce their money supply to avoid a suspension of payments and the depreciation of their banknotes. The Banco del Perú reduced its banknote circulation from 3.37 million soles in February 1869 to 1.9 million in August 1873. At the same time, its ratio of banknotes to paid-in capital declined from 1.7 to 0.5. The Bank of London increased its note issue from 498,000 soles in January 1869 to 1.5 million soles in December 1870. Note issue then remained around that level for the following four years; in August 1873, for example, note issue was 1.7 million soles. However, since the bank increased its paid-in capital in the 1870s, the actual ratio of banknotes to paid-in capital declined from 0.86 in December 1870 to 0.46 in August 1873. In the case of the Banco de Lima, note issue was 1.6 million soles in December 1870, 1.7 million soles in December 1871 and 1.6 million soles in December 1872. However, note issue then declined to 1.1 million soles in August 1873. Therefore, the ratio of banknotes to paid-in capital declined from 0.79 in December 1872 to 0.42 in August 1873. Meanwhile, the Banco de Trujillo increased its note issue from 110,000 soles in December 1871 to 287,000 in December 1872 and 327,000 in July 1873; and the ratio banknotes/paid-in capital increased from 0.44 in December 1871 to 0.58 in December 1872 but then declined to 0.51 in July 1873.

Therefore, most banks of issue reduced their total volume of banknotes in circulation, at least with respect to their paid-in capital. However, the ability of banks to face the redemption of notes did not necessarily improve over time. In the case of the Bank of London, the ratio of cash to banknotes declined from 2.55 in December 1865 to 0.69 in January 1869 but then increased to 1.1 in November 1869. It then remained around 1.0 until December 1872, then declined to 0.6 in August 1873. In the case of the Banco de la Providencia, the ratio increased from 1.38 in December 1867 to 1.77 in November 1869, but then declined to 0.76 in December 1871, and 0.67 one year later. In the case of the Banco del Perú, the ratio of cash to banknotes declined from 1.03 in March 1868 to 0.61 in February 1869 and 0.36 in August 1873. In the case of the Banco Nacional, the ratio declined from 0.55 in December 1872 to 0.25 in August 1873.

Similarly, cash holdings as percentage of banknotes and deposits did not improve over time. In the case of Bank of London, cash



holdings represented 103% of banknotes plus deposits in December 1865, only 44% in January 1869, 71% in November 1869, 39% in December 1872 and 26% in August 1873. In the case of the Banco de la Providencia, cash holdings declined from 83% of banknotes plus deposits in December 1867 to 62% in November 1869 and 31% in December 1872. In the case of the Banco del Perú, cash holdings declined from 48% of banknotes plus deposits in March 1868 to 32% in February 1869 and 11% in August 1873. In the case of the Banco Nacional, cash holdings declined from 31% of banknotes plus deposits in December 1872 to 13% in August 1873.

According to Minister of Finance Elguera, the situation of banks was more difficult by the end of 1873.<sup>30</sup> In his annual report of 1874, Elguera indicated that

the restrictions imposed by banks to all its operations were decreasing the circulation of each of them and hampering the collection of its assets, at the same time as the public, starting to get alarmed by the behavior of these establishments, looked with discontent on their banknotes and began to redeem them by exchanging them for metal.<sup>31</sup>

Since Peru had a pure free banking system, however, the banks of issue that were relatively conservative in their allocation of funds and that therefore did not engage in a massive issue of banknotes would have been more able to face the outflow of specie. The public would have probably “flown to quality” by demanding the redemption of the notes issued by banks that did not back their notes with large amounts of specie, and by demanding the notes issued by the banks that backed their banknotes with large amounts

---

<sup>30</sup> The world crisis of 1873 impacted Latin American economies. A financial crisis occurred in Vienna in May 1873 with a subsequent financial panic in Germany. In September the New York stock market collapsed. In a few months trade between Latin America and Europe started to fall. European banks cut credit, reducing the exportation of capital from England and France to Latin America. Soon several commercial houses went bankrupt (Marichal, 1992, pp. 118–119).

<sup>31</sup> Elguera (1908), p. 127. The original text is:

Las restricciones impuestas por los bancos a todas sus operaciones venían disminuyendo la circulación de cada uno de ellos y dificultando el cobro de su activo, al mismo tiempo que el público, principiando a alarmarse por el proceder de estos establecimientos, miraba con descontento sus billetes y comenzaba a hacerlos efectivos cambiándolos por metálico.

of specie. The public would have probably demanded the notes issued by the Bank of London, since this bank was probably more able to back its note issue by, for example, obtaining specie from its main branch in London. In fact, the evidence shows that this bank increased its cash holding from 776,000 soles in November 1873 to 1.7 million soles one year later. By the end of 1873, however, the government did not allow the market mechanism to operate. By passing a special decree, the government intervened in the banking system and ended the pure free banking system.<sup>32</sup>

### 3. GOVERNMENT INTERVENTION AND THE REGULATED BANKING SYSTEM

In December 8 1873, the national government passed a decree establishing the conditions for the reception of banknotes in government offices.<sup>33</sup> Only the banknotes of some banks would be accepted in government offices. Let us call these banks “chartered banks.” According to the decree, chartered banks could not have less than 100,000 soles of capital and their level of banknotes could not exceed their capital. The government would indicate the amount of authorized note issue for each chartered bank. In addition, chartered banks would deposit Treasury bonds or government bonds of the “consolidated domestic debt” in the mint (*Casa de la Moneda*) as a guarantee for their note issue. The nominal value of those government bonds could not be less than 70% of the authorized note issue. In addition, banknotes could not be of smaller denominations than four soles. These chartered banks also had to publish their balance sheets monthly, declaring the amount of specie and banknotes in circulation. Those balance sheets would be certified by government officials.<sup>34</sup>

---

<sup>32</sup> It is possible to argue that the decline in the ratio cash to banknotes resulted from a better management of assets. Since by the early 1870s banks had already been in operations ten years, the public may have felt more confident about banks’ operations. Also, banks were managed by executives with a better knowledge of the banking business. It is then possible that bank managers became more comfortable with the amount of cash they held in their banks’ vaults, which then led to a decline in the ratio cash to banknotes.

<sup>33</sup> The law was obtained from the website of the Peruvian Congress.

<sup>34</sup> In particular, by the Prior and Councils of the Consulado de Lima and the Diputaciones of Trade of the departments.

The decree was not mandatory to all banks, but only to those that aimed at having their banknotes accepted in government offices. The chartered banks were the following banks: Banco de la Providencia, Banco de Lima, Banco Garantizador, Banco del Perú, Banco Nacional, Banco de Trujillo and Banco Tacna. The first five banks had their main offices in Lima; the other two banks operated in the cities of Trujillo and Tacna, respectively. Each chartered bank was authorized to issue a certain amount of banknotes. The authorized amounts were 500,000 soles for Banco de la Providencia, 800,000 soles for Banco de Lima, 100,000 soles for Banco Garantizador, two million soles for Banco del Perú, 1.8 million soles for Banco Nacional, 250,000 soles for Banco de Trujillo and 200,000 soles for Banco de Tacna.<sup>35</sup>

Not all banks chose to be subject to the decree. The Bank of London and the Banco de Arequipa, for example, did not submit to the decree, so their notes were not accepted in government offices. However, these unchartered banks remained as banks of issue. In December 1874, for example, the Bank of London had 1.46 million soles of banknotes in circulation, and the Banco de Arequipa had around 314,000 soles of banknotes in circulation. It seems then that the decree of 1873 in practice did not prohibit the issue by unchartered banks. The decree rather imposed a discriminatory treatment, attempting to favor chartered banks with the government's acceptance of their banknotes.

The government defended the decree as an important measure to avoid a financial crisis. In his annual report of 1874, Minister of Finance Elguera indicated that in 1873 the financial situation of banks had been extremely difficult.

It is difficult to calculate the consequences that in those times would have followed from the closure of any of the banks. Reduced to banknotes, the [monetary] circulation in Lima and Callao, was in fact even for smaller amounts, and among the most destitute classes of society; the failure of credit institutions would not have just been a commercial and economic matter, but a political and even a social one, of a most grave nature. Both the public, and many of the same people interested in banks, as usual,

---

<sup>35</sup> The authorized note issue comes from Dancuart (1907), p. 20.

looked back to the government as expecting from it, a remedy to such distressing situation.<sup>36</sup>

The government had attempted to reach a solution to the fall in cash holdings, holding several meetings with the directors of the banks. "Meanwhile the time passed, the panic grew, and as it was natural, the circulating media in each bank decreased in the same proportion. In [this] dangerous situation, a determination on the part of the government was indispensable to strengthen the circulation of bank money, it was a necessity felt by all and by all required."<sup>37</sup>

The Lima newspaper *El Comercio* supported the measure as necessary. It indicated that the measure did not affect the economic liberty of banks. Such liberty remained. With the exception of certain general and necessary regulations which had been enacted for the benefit of the public, the banks were as free as before. Actually, banks could accept or refuse to accept the decree. In addition, the decree could provide some support to the fiscal situation, without exerting unfair pressure over banks. Newspapers in other cities also supported the decree (Camprubí, 1957).

Many others, however, criticized the decree. Congressman José Martín de Cárdenas, for example, indicated that the regulation would convert banks into minors subject to a sort of guardianship and that it would be preferable to have self-regulation through a

---

<sup>36</sup> Elguera (1908), p. 127–128. The original text is:

Difícil es calcular las consecuencias que en aquellos momentos hubieran podido seguir a la clausura de alguno de los bancos. Reducida de hecho a papel bancario la circulación en Lima y Callao, hasta por las cantidades más pequeñas, y entre las clases más desamparadas de la sociedad; la falencia de los establecimientos de créditos no habría sido únicamente cuestión mercantil y económica, sino política y aún social, de las más graves. Tanto el público, como muchas de las mismas personas interesadas en los bancos volvían, como de costumbre, la vista al Gobierno, como esperando de él, remedio para tan angustiosa situación.

<sup>37</sup> Elguera (1908), p. 128. The original text is:

Pasaba entre tanto el tiempo, el pánico aumentaba, y como era natural, en la misma proporción disminuía el metálico circulante en cada banco. En situación tan peligrosa, una determinación de parte del Gobierno era indispensable para afianzar la circulación del papel bancario, era una necesidad sentida por todos y por todos exigida.

council, in which the directors of banks would participate in order to reach agreements that guaranteed the circulation of banknotes. Under Cárdenas' view, the suspicious corporations without by-laws or reluctant to reorganize according to the recommendations of the council would then leave the market.<sup>38</sup>

Congressman Luciano B. Cisneros also criticized the decree in 1876, one year after the financial crisis of 1875. According to him, the decree of December 1873 constituted government abuse, forcing banks to hand over 70% of their capital to the government. Cisneros indicated that the decree was the "efficient cause of the tremendous crisis affecting the nation and the economic misfortunes that overwhelm it. That decree had no more reason than the penury of the Treasury, on behalf of which banks were asked part of their fortune, thus leading to represent a real robbery of the powerful beggar against the defenseless rich."<sup>39</sup>

The newspaper *La Patria* also criticized the decree, indicating that such decree was a purely fiscal measure and that it was not an attempt to benefit the public (Camprubí, 1957). First, the newspaper indicated that the government had the obligation of obtaining the guarantees for the confidence that the State provided to the banks. Second, the bonds could constitute a proper guarantee for the current government but was going to affect the fiscal situation in 1876, and therefore the guarantees did not offer confidence at all to the note bearers. Third, banknotes would surely depreciate against specie. Fourth, the system of regulating the circulation of banknotes at the will of the Executive could annihilate the freedom of banks and lead to the establishment of only one privileged bank, favored by the banker-government, the worst of all calamities in a democratic-republican country.

Francisco García-Calderón, businessman, banker, and President of Peru in 1881, was an important critic of the measures taken by

---

<sup>38</sup> Cárdenas (1874), taken from Salinas (2011).

<sup>39</sup> Cisneros (1876). The original text is:

Causa eficiente de la tremenda crisis que atraviesa la nación y de las desgracias económicas que la abruman. Ese decreto no tuvo más razón de ser que la penuria del fisco, en nombre del cual se pidió a los bancos parte de su fortuna, llegando así a representar una verdadera expoliación del mendigo poderoso contra el rico indefenso.

the government. In his *Memorias del Cautiverio* written in the 1880s, García-Calderón indicated that although banks faced a difficult situation as a result of the outflow of specie, in the absence of government intervention, banks would have successfully dealt with their liquidity problems. In his own words:

If nothing extraordinary had happened, this situation could have lasted long, and happily ended because, once known, the banks could have repaired it. But the government which had few resources because in 1872 guano was barely enough to pay the service of the foreign debt, asked banks for money; and as they could not lend it, it [the government] seized authority. Forgetting that the banks had been established as societies with complete industrial liberties and that banknotes were circulating media, received as such in the fiscal offices, and recalling that in the United States of America and some other nations banks had to guarantee their circulating paper, it [the government] enacted a decree destroying the freedom of issue and demanding that those banks that wished their banknotes to be received by the Treasury, guarantee their issue, buying domestic public debt at par. Thereby the government obtained the money it sought; and banks were no longer free.<sup>40</sup>

The specie holdings of the chartered banks then declined. In his annual report of 1876, Minister of Finance Juan Elguera indicated that

since the orders of the guano contractors over guano production ended, commerce had to export cash every day in greater proportions to replace the lack of bills [of exchange] that constituted, from thirty years ago, the main means of payment of our business with the outside world. Month

---

<sup>40</sup> García-Calderón (1949), p. 256. The original text is:

Si no hubiera ocurrido nada extraordinario, esta situación podía haber durado largo tiempo, y terminado felizmente porque, una vez conocida, los bancos podrían haberla reparado. Pero el Gobierno que tenía pocos recursos porque en 1872 el guano escasamente bastó para el servicio de la deuda externa, pidió a los bancos dinero; y como no pudieron prestárselo, dió un golpe de autoridad. Olvidando que se habían establecido como sociedades de completa libertad industrial y que los billetes eran moneda circulante, recibida como tal en las oficinas fiscales; y recordando que en los Estados Unidos de Norte-América y en algunas otras naciones los bancos tenían que garantizar su papel circulante, dictó un decreto destruyendo la libertad de emisión y exigiendo que aquellos bancos que desearan que sus billetes fueran recibidos por el Fisco, garantizaran sus emisiones, comprando deuda pública interna por un valor equivalente a ellas. De este modo obtuvo el Gobierno el dinero que buscaba; y los bancos dejaron de ser libres.

to month, the effects of the continuous extraction of currency from the vaults of banks could be felt.<sup>41</sup>

In a free banking system, a bank of issue has to restrict its issue of banknotes and reduce its loans when the economy faces an outflow of specie to avoid the depreciation of its banknotes, unless it obtains more specie for its vaults from a loan or an increase in its capital. Consistently, unchartered banks restricted their note issue. The Bank of London, for example, reduced its note issue from 1.6 million soles in December 1873 to 1.46 million soles in December 1874. In the case of the Banco de Arequipa, its banknotes declined from 371,000 soles in December 1873 to 314,000 soles in December 1874. Both banks, however, increased their cash holdings, perhaps concerned about the possibility of a bank run. In the case of the Bank of London, cash holdings increased from 1.05 million soles in December 1873 to 1.78 million soles in December 1874; whereas in the case of the Banco de Arequipa, cash holdings increased from 195,000 soles in December 1873 to 458,000 soles in December 1874.

Therefore, for these two banks, the ratio of cash to banknotes, an indicator of the ability of banks to face a massive demand for specie, increased substantially. The ratio for the Bank of London increased from 0.67 in December 1873 to 1.23 in December 1874; and the ratio for the Banco de Arequipa increased from 0.53 in December 1873 to 1.46 in December 1874. Cash holdings of these unchartered banks also declined as a proportion of their deposits and banknotes. In the case of the Bank of London, as a proportion of banknotes and deposits, cash holdings increased from 31% in December 1873 to 37% in December 1874. In the case of the Banco de Arequipa, cash holdings increased from 16% of banknotes and deposits in December 1873 to 29% in December 1874.

---

<sup>41</sup> Elguera (1908), p. 265. The original text is:

Desde que cesaron los giros de los contratistas del guano sobre los productos de éste, el comercio debió exportar el numerario, cada día en mayores proporciones para remplazar la falta de letras que constituían, desde treinta años atrás, el principal medio de pago de nuestros negocios con el exterior. Mes a mes se podían palpar los efectos de la extracción continua de moneda en las cajas de los Bancos.

The experience of the chartered banks was quite different. In most cases, the volume of banknotes declined. However, the amount of specie holdings declined much faster. Overall, the four main chartered banks (Banco de la Providencia, Banco del Perú, Banco de Lima and Banco Nacional del Perú) increased their note issue from 6.3 million soles in December 1873 to 6.4 million soles in December 1874 but then reduced it to 5.8 million soles in July 1875 (Camprubí, 1957).<sup>42</sup> Cash holdings, however, declined from 2.9 million soles in December 1873 to 2.5 million soles in December 1874 and then 1.2 million soles in July 1875.

Therefore, the ratio of cash to banknotes for those four chartered banks declined from 0.47 in December 1873 to 0.39 in December 1874 and 0.2 in July 1875. Cash holdings of chartered banks as a proportion of banknotes plus deposits also declined over time. Overall for the four main chartered banks, cash declined from 20.4% of banknotes plus deposits in December 1873 to 20.2% in December 1874 and 11.9% in July 1875.<sup>43</sup>

---

<sup>42</sup> The volume of banknotes issued by the Banco del Perú declined from 1.9 million soles in August 1873 to 1.4 million soles in July 1875. The Banco de Lima decreased its note issue from 812,000 soles in December 1873 to 534,000 soles in December 1874. However, the Banco Nacional del Perú increased its note issue from 3.2 million soles in December 1873 to 3.6 million soles in December 1874.

<sup>43</sup> In the case of the Banco de la Providencia, as a proportion of banknotes plus deposits, cash holdings declined from 29% in December 1873 to 20% in November 1874 and 15% in July 1875. In the case of Banco del Perú, cash holdings declined from 15% of notes issue plus deposits in December 1873 to 10% in July 1875. In the case of the Banco de Lima, as a proportion of banknotes and deposits, cash holdings declined from 29% in December 1873 to 24% in December 1874 and 10% in July 1875. In the case of the Banco Nacional, cash holdings remained in 15% in December 1873 and in December 1874, but then declined to only 8% in July of 1875.



**Table 3. Government Intervention and Liquidity Ratios, 1873–75**

Ratio Cash / Notes	Chartered banks				Unchartered banks	
	Banco de la Providencia	Banco del Peru	Banco de Lima	Banco Nacional	Bank of London	Banco de Arequipa
December 1872	0.67	0.72	0.85	0.55	1.03	0.78
June 1873	0.79	0.44	0.90	0.36	0.65	
November 1873	0.80	0.48	0.73	0.36	0.49	
December 1873	0.86	0.46	0.90	0.31	0.67	0.53
April 1874	0.56	0.60	0.79	0.29	1.03	
November 1874	0.54		0.78	0.34	1.16	1.56
March 1875	0.75	0.40	0.62	0.24	1.13	1.77
July 1875	0.43	0.17	0.28	0.15	1.01	0.97

Ratio Cash / (Notes + Deposits)	Banco de la Providencia	Banco del Peru	Banco de Lima	Banco Nacional	Bank of London	Banco de Arequipa
December 1872	0.31	0.29	0.26	0.31	0.39	0.25
June 1873	0.27	0.14	0.33	0.18	0.27	
November 1873	0.31	0.15	0.25	0.19	0.22	
December 1873	0.29	0.15	0.29	0.16	0.31	0.16
April 1874	0.20	0.20	0.21	0.12	0.40	
November 1874	0.20		0.19	0.18	0.38	0.32
March 1875	0.22	0.19	0.17	0.11	0.32	0.37
July 1875	0.15	0.10	0.10	0.08	0.33	0.21

Source: Several numbers of the newspaper El Comercio.

As Francisco García-Calderón (1949) indicated in his posthumously published memoirs: “Those who accepted the decree and guaranteed their issue, worsened their already difficult situation; because on one hand the amount employed to purchase government bonds became loans without repayment, which decreased the circulating capital; and on the other hand, having guaranteed the note issue, it was not possible to secure it once again with cash holdings in the vaults. The existence of cash declined and it finally came the time in which it was impossible to redeem the banknotes into money.”<sup>44</sup>

<sup>44</sup> García-Calderón (1949), pp. 256–257. The original text is:

Los que aceptaron el decreto y garantizaron sus emisiones, empeoraron su ya difícil situación; porque de un lado la cantidad empleada en comprar los

On August 1st 1875, the directors of the Banco Nacional informed the government of the critical situation of their bank due to the lack of specie and therefore the impossibility of continuing with its operations. On July 31, 1875 cash in the bank was only 15% of banknotes and 8% of banknotes plus deposits. The government learned that other banks, not only the Banco Nacional, faced a persistent drain of their specie holdings. The government then organized a meeting between the managers of all banks of Lima to discuss the proper measures to overcome the situation. The managers of those banks, in particular those of the Banco Nacional del Perú, Banco de Lima, Banco de Perú, Banco de la Providencia and Bank of London, argued that the failure of one bank would generate the general collapse of the entire financial system because the businesses of the banks were deeply interconnected. Expecting that the failure of the banks would affect the entire Peruvian society, the government decreed the suspension of payments of specie.<sup>45</sup> The suspension of payments was adopted not only by the banks that were subject to the decree of 1873, but also by other banks. The Bank of London, for example, also suspended payments.

#### 4. SUSPENSION OF PAYMENTS

The government defended the suspension of payments as a necessary measure. Minister of Finance Elguera indicated that guano revenues were not anymore a large source of specie and that the export of specie was inevitable. Then the conservation of specie in the vaults of banks became impossible. According to Elguera, it was not possible for banks to return to redemption of notes into specie, unless new guano contracts were signed.<sup>46</sup> Elguera was not

---

bonos del Gobierno se convirtió en préstamo sin reembolso, que disminuyó el capital movable; y de otro, garantizada de este modo la emisión, no fue posible asegurarla otra vez con dinero en caja. Disminuyó la existencia de numerario y llegó al fin el momento en que fue imposible convertir el billete en dinero.

<sup>45</sup> Information in this paragraph comes from Elguera (1908).

<sup>46</sup> Guan contracts involved advances from the cosignatories to the State guaranteed by the future sale of guano.

very optimistic about the future, considering guano contracts a “very remote” possibility.<sup>47</sup>

Most newspapers qualified the suspension of payments as necessary, asking the public to maintain the confidence on the economy and the banking sector. Others, however, criticized the suspension of payments. For instance, the newspaper *La Sociedad*, directed by the Presbítero Tovar, opposed the measure, indicating that the government had preferred to serve the interests of banks rather than the interests of society (Camprubí, 1957).

On August 9, 1875, the government enacted a decree that regulated the issue of banknotes. According to this decree, the chartered banks whose note issue was authorized in December 1873 could issue banknotes up to their authorized amount. Banks with an issue exceeding the authorized amount had to guarantee the excess by following the decree of December 1873. Banks without an authorized note issue had to limit their issue to the amount they had on July 31, 1875. Each bank also had to accumulate specie to re-establish convertibility by December 31, 1875. In addition, banks had to publish their balance sheets, specifying their note issue (which could not exceed the authorized amount), as well as their cash balances and the composition of cash balances.

One month later, on September 10, 1875, the government signed a contract with four “associated banks”: Banco Nacional, Banco La Providencia, Banco de Lima and Banco del Perú. According to the contract, these banks would make a loan to the government for 18 million soles decomposed as follows:<sup>48</sup> a) 3 million soles in Treasury bonds as guarantee of their banknotes (Decree of December 18, 1873) and current debts of the government with those banks; b) 2 million soles in current debts of the government to the banks; c) 1.1 million soles of banknotes for the payment of Treasury bonds that were due on November 1, 1875; d) 2 million soles in a monthly payment; e) 2.4 million soles of banknotes in four monthly payments of 600,000 soles each; f) 4 million soles of banknotes in 16 monthly payments of 250,000 soles each; g) 2.1

---

<sup>47</sup> Elguera (1908), p. 266. Decades later, Alzamora (1932), indicated that the suspension of payments saved not only the banks, but the entire society.

<sup>48</sup> The figures in this paragraph are in paper soles.

million soles of banknotes for the payment of the service of the consolidated domestic debt; and h) 1.4 million soles of banknotes for the rescue of bonds issued by the government.

The government would provide the following assets as a guarantee for the loan of 18 million soles: a) 6 million soles in 200,000 tons of guano to be exported to Mauritius, Reunión and other French and English colonies; b) 3.5 million soles in commercial bills of exchange on Europe on the first funds to be obtained from the guano contracts; c) 4 million soles in domestic bonds, including the 3 million soles that the banks had to use as a guarantee of their banknotes; and d) 4.5 million soles from the products (revenues) from nitrate exports.<sup>49</sup>

The loan contract also established that the interest rate was 6% per year. The interest would be paid monthly from the revenues coming from nitrate exports. Also, the issue of banknotes, which had been 9.1 million soles by July 31, 1875, could increase up to 15 million paper soles (around 12.8 million silver soles). The authorized amount of banknotes of each of the four banks would be proportional to the each bank's capital. The banknotes from this issue would be the only banknotes accepted in the fiscal offices, municipal offices and the offices of the Beneficence of Lima (a quasi-governmental charitable organization), with the exception of the departments of Piura, Trujillo and Tacna, where the banknotes of the local banks would be still in circulation until December 31 of 1875. In addition, by the end of 1875, the associated banks agreed to have specie holdings worth 30% of their note issue on July 31, 1875.

It is important to mention that the decree did not prohibit note issue by the non-associated banks. The four associated banks had their note issue backed by the government. However, other banks could still issue banknotes. The Bank of London and the Banco de Arequipa, for example, did not lend funds to the government, but were not forced to withdraw their banknotes from circulation. In February 1877, the Bank of London still had 146,000 soles of banknotes in circulation, and in December 1876 the Banco de Arequipa had 58,000 soles of banknotes in circulation.

---

<sup>49</sup> The guarantees may refer to silver soles.

In addition, the agreement provided for the creation of a central bank. Once 3 million soles in specie were collected by the government, the associated banks would organize a central bank in order to centralize the note issue, unifying it and concentrating the assets that guaranteed it. The central bank would be managed by the banks of issue and the by-laws would be approved by the government.<sup>50</sup>

The government defended the contract of 1875 as a mechanism to channel specie to the budget needs. According to Minister of Finance Juan Elguera:

This operation so combined saved the country, at the end of 1875, from a major disaster; it has allowed commerce a settlement, impossible without it; it has favored, and powerfully stimulated industries in exportable productions and has given the government time to develop in two negotiations of guano and nitrate the necessary elements to restore fiscal and economic life of the Republic.<sup>51</sup>

However, although the contract “saved” the government from a default on its obligations, it did not improve the financial situation of banks. In fact, the government bonds, employed as a guarantee for the loan of 18 million soles, were not really a solid guarantee. The government had been incurring increasing debts and therefore government bonds had an increasing probability of default. The fiscal deficit was increasing from the late 1860s: the government went from having surpluses between 1862 and 1867 to having persistent deficits between 1869 and 1876. In addition, other sources of funding for the fiscal deficits were scarcer and more expensive in the 1870s than in previous decades. All loans by the government between 1853 and 1862 bore an interest rate of 4.5%. A

---

<sup>50</sup> This central bank was not successful, but the State centralized the issue of banknotes (Quiroz, 1994).

<sup>51</sup> Elguera (1908), p. 267. The original text is

Esta operación así combinada salvó al país, a fines de 1875, de un gran desastre; ha permitido el comercio una liquidación, imposible sin ella; ha favorecido, y estimulado poderosamente las industrias de producciones exportables y ha dado tiempo al Gobierno para desarrollar en las dos negociaciones de huano y de salitre, los elementos necesarios para restablecer la vida fiscal y económica de la República.

loan in 1865 from Thomson, Bonar & Cia had a rate of 5%. Another loan contracted in 1866 charged a rate of 7%. The following three loans in 1869, 1870 and 1872 had interest rates of 5%, 6% and 5%, respectively (Vizcarra, 2010). In an article published in the *Journal of the Statistical Society of London*, Baxter (1874) indicated that the yield on the Peruvian government debt was around 9.7%. Peru was then among the countries with the highest interest rates in the world. The national government may have looked at the banks of issue as a relatively low-cost source of funding.

The intervention of the government in the banking sector had important effects on the value of banknotes and on the stability of the banking sector. As expected, paper money experienced a significant depreciation after the banks suspended conversion of their banknotes. On August 1, 1875, one paper sol was worth one sol in specie. On August 31, 1875, however, one silver sol was worth 1.045 paper soles; and on September 30<sup>th</sup>, only one month later, one silver sol was worth 1.115 paper soles.<sup>52</sup> All commercial houses had lists of prices in silver and paper soles. Even farmers sold one quintal of sugar on four soles or five paper soles (Salinas, 2011). Outside Lima, the depreciation was even greater (Camprubí, 1957). In 1876 and 1877 banknotes continued depreciating. On August 31 of 1876, one silver sol was worth 1.335 paper soles; a year later one silver sol was worth 1.875 paper soles.<sup>53</sup>

On the other hand, the decree also impacted the health of the financial sector. In a free banking system, banks of issue have to restrict their own issue of banknotes when the economy faces an outflow of specie in order to avoid the depreciation of their banknotes. The contract of 1875, however, encouraged associated banks to increase their issue: total note issue could increase from 9.1 million paper soles (as it was in July 1875) to 15 million paper soles. As expected, the issue of the four associated banks increased from 1875. Overall, the volume of banknotes of the four associated banks increased from 5.78 million paper soles in July 1875 to 11.66 million soles in December 1875 and 13.39 million paper soles in December

---

<sup>52</sup> Some newspapers, for example, indicate that in late 1875 soles were purchased with 45% of premium over paper soles (Camprubí, 1957).

<sup>53</sup> The figures on the exchange rate between paper soles and soles were taken from Dancuart (1908).

1876 (Camprubí, 1957).<sup>54</sup> Specie holdings increased from 950,000 soles in September 1875 to 2.3 million soles in December 1875, but then declined to 1.9 million silver soles in December 1876. The ability of banks to face the demand for specie declined in 1876: the ratio of specie to banknotes declined from 0.19 in December 1875 to only 0.14 in December 1876.<sup>55</sup> Specie holdings also declined as a proportion of banknotes plus deposits, from 11.6% in December 1875 to 8.1% in December 1876.<sup>56</sup>

The decline in the ability of banks to face the demand for specie is largely explained by the new loans granted to the national government. Total credit to the government reached 20.6 million paper soles by December 1876. Credit to the government actually exceeded credit to the private sector, which was only 11.2 million paper soles in December 1876.<sup>57</sup>

In contrast, the non-associated banks restricted their note issue. The Bank of London, for example, reduced its note issue from 1.5 million

---

<sup>54</sup> For instance, the volume of banknotes issued by the Banco del Perú increased from 1.35 million soles in July 1875 to 4 million soles in April 1876, and 4.6 million soles in December 1876. The Banco de Lima increased its note issue from half a million soles in July 1875 to 2.5 million soles in December 1875 and 2.8 million soles in December 1876. Similarly, the Banco Nacional del Perú increased its note issue from 3.3 million soles in July 1875 to 4.99 million soles in December 1875, and 5.1 million soles in December 1876. The Banco de la Providencia increased its note issue from 588,000 soles in July 1875 to 868,000 soles in December of 1876.

<sup>55</sup> The liquidity ratios express relationships between cash holdings, note issue and deposits. The figures on cash holdings are always on silver soles (or simply soles). Figures on note issue and deposits are in silver soles until 1874 and in paper soles from 1875. Although cash holdings are not expressed in the same monetary unit as note issue or deposits from 1875, it is still useful to calculate the liquidity ratios as simply the ratios cash/notes and cash/(notes + deposits) in order to determine the capacity of banks to redeem their notes into specie at par.

<sup>56</sup> In the case of Banco del Perú, as a percentage of banknotes plus deposits, cash holdings declined from 19% in August 1875 to 16% in December 1875 and 12% in December 1876. In the case of the Banco de Lima, cash holdings declined from 15% of note issue plus deposits in August 1875 to 9% in December 1875 and 8% in December 1876. In the case of the Banco de la Providencia, as a proportion of banknotes plus deposits, cash holdings declined from 15% in August 1875 to 11% in January 1876. In the case of Banco Nacional, as a percentage of note issue and deposits, cash holdings initially increased from 12% in August 1875 to 17% in December 1875, but then declined to 10.5% in December 1876.

<sup>57</sup> Credit to the private sector actually declined from 15 million paper soles in July of 1875.

paper soles in August 1875 to 590,000 paper soles in December 1875 and 145,000 paper soles in February 1877. Similarly, the banknotes of the Banco de Arequipa declined from 309,000 paper soles in July 1875 to 210,000 paper soles in December 1875 and 58,000 paper soles in December 1876. As a result, their ability to face demand for specie increased. The ratio of cash to banknotes increased from 2.85 in December 1875 to 5.87 in February 1877 for the Bank of London and from 1.38 in December 1875 to 3.1 in December 1876 for the Banco de Arequipa. Both banks would have had no problem facing the demand for conversion of all their note holders.<sup>58</sup>

These figures show that the four associated banks issued banknotes to fund an increasing amount of credit to the national government. At a time in which the economic activity was in decline and specie flew out of the country, the government turned to the four banks of issue for funding. The direct consequence of the contract of 1875 was then an increasing supply of paper money and a decreasing ability of the associated banks to redeem their notes into specie. That the non-associated banks Bank of London and Banco de Arequipa accumulated reserves and reduced their note issue suggests that the contract of 1875 deteriorated, not improved, the financial situation of the associated banks.

As the financial situation of the associated banks deteriorated in 1875–1877, the government increased its role in the banking sector. By a decree of August 17, 1877, the government assumed the responsibility for the 16 million paper soles issued by the four associated banks. In addition, it assumed responsibility for 5.33 million paper soles issued by the *Compañía de Obras Públicas y Fomento del Perú*, established by the railroad contractor Henry Meiggs. The banknotes became then officially government paper money or *billete fiscal*. The paper money did not regain value. By August 17, 1877 one silver sol was worth 1.865 paper soles, and by December 31 1877, one silver sol was worth 1.79 paper soles.<sup>59</sup>

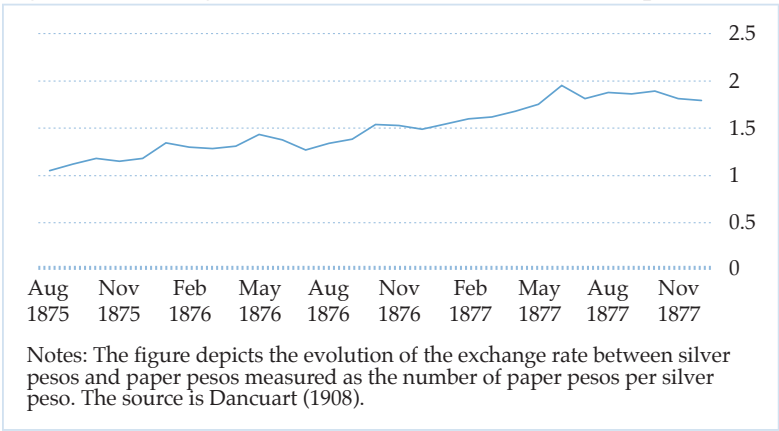
---

<sup>58</sup> One problem with this data is that cash holdings include not only specie but also banknotes from other banks.

<sup>59</sup> In 1879 the government prohibited any issue of banknotes. Morón (1993) argues that banks never again had the same freedom as prior to 1879. In the following years, the use of *billetes fiscales* was limited to retail transactions. As Quiroz (1993) indicates, “paper currency, worn out by the general lack of an alternative means of payment, remained in the hands of consumers in Lima and the northern



Figure 1. Exchange Rate Between Silver Soles and Paper Soles



5. CONCLUSIONS

The case of Peru illustrates the benefits of a pure free-banking system and the effects of government intervention on the banking sector. Until 1873, the operations of banks operating in Peru were only subject to ordinary commercial legislation. This legislation was very liberal. No capital or specie requirements were required for the creation and operations of corporations, including banks. The issue of banknotes was also not subject to any regulatory constraint. Free competition led to a quite stable banking system. Only once in a decade (in particular, in 1866) did one bank face a suspension of payments. Soon, however, that problem was solved, and the banking sector operated under no severe problems.

As expected, in an economy with an inflow of specie, banks issued banknotes backed with specie. As the economy started to experience a continuous outflow of specie (to a large extent due to the declining fiscal revenues and fiscal deficits), banks started to reduce their banknotes in circulation.

provinces. ... In the south, Bolivian currency served as a basic exchange medium. ... The effective eradication of the paper money in 1887, a triumph for merchants and bankers over consumers and debtors, established a firm base for financial activities in Lima (p. 50). Banknotes would only appear again in 1914, but under a much more restrictive legislation (Alzamora, 1932).

The government, however, intervened in the market in 1873 and 1875 in order to obtain funding for its own deficit. As a result, the banks that loaned funds to the government faced greater financial problems than the banks that did not. The banks closely related to the government (first, the chartered banks, and then the associated banks) increased their note issue at a time in which the outflow of specie would have pushed banks to reduce their volume of banknotes in circulation. It is interesting to notice that the banks that were not associated with the government performed much better than the chartered and associated banks. A foreign bank (the Bank of London) and a bank from Arequipa (the Banco de Arequipa) reduced their volume of banknotes and increased their ability to face an unexpected demand for specie.

The case of Peru is interesting because it confirms that the government intervention does not solve any problem of free banking. The government intervention actually made the financial situation worse in Peru in the 1870s. Had the government not intervened in the banking system, the market alone would have forced banks to reduce their banknotes in circulation.

## APPENDIX

Peru had two currencies during this period. Prior to 1863 the currency was the peso, equivalent to 22.5 grams of pure silver. From 1863 the official currency was the sol. This currency had the same silver content. Therefore the exchange rate between pesos and soles was one peso = one sol. From 1875, however, as some banks suspended convertibility, paper soles lost value with respect to silver soles. The exchange rate between paper pesos and paper soles was obtained from Dancuart (1908). I use "sol" to refer to the "silver sol," unless otherwise stated. All monetary figures in this article are expressed in silver soles.

The liquidity ratios express relationships between cash holdings, note issue and deposits. The figures on cash holdings are always in soles. Original figures on note issue and deposits are in (silver) soles until 1874 and in paper soles from 1875. Although cash holdings are not expressed in the same monetary unit as note issue or deposits from 1875, it is still useful to calculate the liquidity ratios as simply the ratios cash/notes and cash/(notes + deposits)

in order to determine the capacity of banks to redeem their notes into specie at par.

Information on banks' capital, credit, deposits and note issue come from banks' balance sheets. Those balance sheets were published in the newspaper *El Comercio*. Aggregate figures refer to the following banks: Banco de la Providencia, Bank of London, Banco del Perú, Banco de Lima, Banco Nacional, Banco Garantizador, Banco de Trujillo and Banco de Arequipa. Cash holdings are always measured in soles. Prior to 1875, credit, deposits and note issue were measured in soles. From 1875, however, it seems that original figures on credit, deposits and note issue were in paper soles, even for the non-associated banks.<sup>60</sup>

Information on total exports and imports comes from Mitchell (1993). The original figures are in silver pesos until 1862 and soles from 1863. Figures on guano exports come from Hunt (2011).

The figures on public revenues and spending come from Tantaleán (1983). Revenues and spending refer to the actual amounts of revenues and spending. There were important differences between actual amounts and budgeted figures. Revenues do not include loans. The original figures are in pesos until 1862 and in soles from 1863. Since paper soles were accepted for the payment of taxes, I assumed that official figures in 1875 were in paper soles.

GDP figures come from Seminario, Alva and Ponce (2010) and Seminario and Beltrán (1998). The first source reports GDP in constant dollars of 2000 from 1830, and the second source reports GDP in current dollars for 1896. I then estimated GDP in current dollars for 1840–1875 using the growth rate of real GDP (in constant dollars) and U.S. inflation (from the GDP deflator). The figures were then converted into current soles by using an exchange rate between silver soles and dollars. This exchange rate was estimated using the specie content of one silver sol and one sterling pound as well as the exchange rate between dollars and sterling pounds as reported by Officer (2008).

---

<sup>60</sup> Camprubí (1957), for example, indicates that the Bank of London also suspended payments, even though it was not chartered by the government.

## REFERENCES

- Alzamora, Lizardo. 1932. *El Billeto de Banco en el Perú*, Lima: Librería e Imprenta Gil.
- Banco de la Providencia. 1868. *Exposición que hacen al Público, a los Tribunales, al Supremo Gobierno de la Nación el Directorio y Accionistas del Banco "La Providencia,"* Lima: Imprenta de "El Comercio."
- . 1870. *Memoria que el Directorio del Banco "La Providencia" presenta a la Junta General de Accionistas el día 17 de julio de 1870.* Lima: Imprenta del Comercio.
- Banco de Lima. 1871. *Memoria correspondiente a las operaciones del Banco de Lima en el año 1870 que sus Directores Gerentes presentan al Directorio del mismo.* Lima: Imprenta del "Heraldo de Lima."
- Baxter, R. Dudley. 1874. "The Recent Progress of National Debts," *Journal of Statistical Society of London* 37, no. 1: 1–20.
- Camprubí, Carlos. 1957. *Historia de los Bancos en el Perú (1860–1879)*. Lima.
- Cárdenas. 1874. "Sociedades Anónimas," *El Comercio* 30.
- Cisneros, Luciano N. 1876. *Discursos del Diputado por Huánuco Doctor Luciano B. Cisneros al discutirse la cuestión sobre bancos en la sesión del 29 de setiembre de 1876*, Lima: Imprenta de "La Patria."
- Clair, Robert, and Gerald O'Driscoll. 1991. "Learning from One Another: The U.S. and European Banking Experience," Research Paper No. 9108, Federal Reserve Bank of Dallas, May.
- Contreras, Carlos. 2012. *La economía pública en el Perú después del guano y del salitre. Crisis fiscal y élites económicas durante su primer siglo independiente*, Lima: BCRP, IEP.
- Dancuart, Pedro Emilio. 1905. *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 7, Lima: Librería e Imprenta Gil.
- . 1906. *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 8 (1869–1870). Lima: Imprenta de "La Revista."
- . 1907. *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 9 (1871–1874), Lima: Imprenta de "La Revista."

- . 1908. *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 10, Lima: Imprenta de “La Revista.”
- Diamond, Douglass, and Phillip Dybvig. 1983. “Bank Runs, Deposit Insurance, and Liquidity,” *Journal of Political Economy* 91, no. 3: 401–419.
- Donaldson, R. Glenn. 1992. “Sources of Panics: Evidence from the Weekly Data,” *Journal of Monetary Economics*, 30, no. 2: 277–305.
- Dow, Sheila. 1996. “Why the Banking System Should Be Regulated,” *Economic Journal* 106, no. 436: 698–707.
- Dowd, Kevin. 1989. *The State and the Monetary System*. Hemel Hempstead: Phillip Allan.
- . 1993. *Laissez-Faire Banking*. New York and London: Routledge.
- . 1994. “Competitive Banking, Bankers’ Clubs, and Bank Regulation,” *Journal of Money, Credit and Banking* 26, no. 2: 289–308.
- . 1996. “The Case for Financial Laissez-Faire,” *Economic Journal* 106, no. 436: 679–687.
- . 2002. *The Experience of Free Banking*. London: Routledge.
- Elguera, Juan. 1906. “Memoria del Ministro de Hacienda señor Juan Ignacio Helguera a la Legislatura Ordinaria de 1868.” In Dancuart, Pedro Emilio, *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 8, Lima: Imprenta de “La Revista,” pp. 127–152.
- . 1908. Memoria del señor Ministro de Hacienda don Juan Ignacio Elguera a la Legislatura de 1874”, in Dancuart, Pedro Emilio, *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 10, Lima: Imprenta de “La Revista,” pp. 113–149.
- . 1908. “Memoria del Ministro de Hacienda señor don Juan Ignacio Helguera al Congreso de 1876”, in Dancuart, Pedro Emilio, *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 10, Lima: Imprenta de “La Revista,” pp. 250–282.
- García-Calderón, Francisco. 1949. *Memorias del Cautiverio*. Lima: Librería Internacional del Perú S. A.
- Guerra-Martinere, Margarita. 1996. *La Ocupación de Lima 1881–1883, Aspectos Económicos*. Lima: Pontificia Universidad Católica del Perú.

- Hayek, Friedrich A. 1990. *The Denationalisation of Money, The Argument Refined*. London: IEA.
- Hunt, Shane. 2011. *La formación de la economía peruana. Distribución y crecimiento en la historia económica del Perú y América Latina*. Lima: PUCP, BCRP, IEP.
- Joslin, David. 1963. *A Century of Banking in Latin America to commemorate the centenary in 1962 of The Bank of London & South America Limited*. London, UK: Oxford University Press.
- Kareken, John, and Neil Wallace. 1978. "Deposit Insurance and Bank Regulation: A Partial Equilibrium Exposition," *Journal of Business* 51: 413–438.
- Kaufman, George. 1994. "Bank Contagion: A Review of the Theory and Evidence", *Journal of Financial Services Research* 8, no. 2: 123–150.
- Marichal, Carlos. 1992. *Historia de la Deuda Externa de América Latina*, Madrid, Spain, Alianza Editorial.
- Merton, Robert. 1977. "An Analytic Derivation of the Cost of Deposit Insurance and Loan Guarantees," *Journal of Banking and Finance* 1: 3–11.
- Mitchell, B. R. 1993. *International Historical Statistics. The Americas, 1750–1988*. New York: Stockton Press.
- Morón, Eduardo. 1993. *La Experiencia de Banca Libre en el Perú, 1860–1879*. Lima: Centro de Investigación de la Universidad del Pacífico.
- Noboa, Ignacio. 1905. "Memoria del Sr. Ministro de Hacienda Ignacio Noboa a la Legislatura de 1864." In Dancuart, Pedro Emilio, *Anales de la Hacienda Pública. Historia y legislación fiscal de la República*, vol. 7. Lima: Librería e Imprenta Gil, pp. 243–265.
- Officer, Lawrence H., "Dollar-Pound Exchange Rate From 1791," MeasuringWorth, 2008. Available at <http://www.measuringworth.org/exchange-pound/>
- Pardo, Manuel. 1867. *Memoria que el Ex-Secretario de Estado en el despacho de Hacienda y Comercio presenta al Jefe Supremo Provisorio de la República*, Lima: Imprenta del Estado.
- Quiroz, Alfonso. 1989. *Banqueros en Conflicto. Estructura financiera y economía peruana, 1884–1930*, Lima: Universidad del Pacífico.

- . 1993. *Domestic and Foreign Finance in Modern Peru, 1850–1950. Financing Visions of Development*. Pittsburgh: University of Pittsburgh Press.
- . 1994. “Desarrollo de la Banca Central en Perú (1875-1935).” In Pedro Tedde and Carlos Marichal (eds.), *La Formación de los Bancos Centrales en España y América Latina (Siglos XIX y XX)*, Vol. II, Estudios de Historia Económica, 30, Madrid, Spain: Banco de España, pp. 103–117.
- Rockoff, Hugh. 1974. “The Free Banking Era: A Reexamination,” *Journal of Money, Credit and Banking* 6, no. 2: 141–167.
- Rolnick, Arthur and Warren Weber. 1993. “New Evidence on the Free Banking Era,” *American Economic Review* 73, no. 5: 1080–1091.
- Salinas, Alejandro. 2011. *Cuatros y billetes. Crisis del sistema monetario peruano (1821-1879)*. Lima: BCRP, IEP.
- Selgin, George. 1988. *The Theory of Free Banking. Money Supply under Competitive Note Issue*. Lanham, Md.: Cato Institute, Rowman and Littlefield Publishers.
- Seminario, Bruno and Arlette Beltrán. 1998. *Crecimiento Económico en el Perú: 1896–1995. Nuevas Evidencias Estadísticas*. Lima: Universidad del Pacífico.
- Seminario, Bruno, Nikolai Alva and Luis Ponce. 2010. *La Economía en el Perú Republicano*. Lima: Ceplan.
- Tantaleán, Javier. 1983. *Política económico-financiera y la formación del Estado: Siglo XIX*, Lima: CEDEP.
- . 2011. *La Gobernabilidad y el Leviatán Guanero. Desarrollo, crisis y guerra con Chile*. Lima: BCRP, IEP.
- Vicuña, Francisco. 1867. *El Crédito Social*. Lima.
- Wheelock, David. 1992. “Regulation and Bank Failures: New Evidence from the Agricultural Collapse of the 1920s,” *Journal of Economic History* 52, no. 4: 806–825.
- Wheelock, David and Paul Wilson. 1995. “Explaining Bank Failures: Deposit Insurance, Regulation and Efficiency,” *Review of Economics and Statistics* 77, no. 4: 689–700.
- White, Lawrence. 1989. *Competition and Currency. Essays on Free Banking and Money*, New York and London: New York University Press.

———. 1995. *Free Banking in Britain: Theory, Experience and Debate, 1800–1845*, Cambridge: Cambridge University Press.

Zegarra, Luis F. 2013. "Private Lenders, Banks and Mortgage Credit in Peru," Working Paper. Lima: CENTRUM Católica.