

Mortgage banks and export agriculture in Peru, 1840-1880

LUIS FELIPE ZEGARRA

1. INTRODUCTION

In Peru, prior to the creation of mortgage banks, private lenders made mortgage loans to landowners under a variety of conditions. Some loans were for a few months, others for more than two years; some loans were for a few hundred *soles* (the *sol* became the monetary unit of Peru after the reform of 1863), others for more than two thousand *soles*; some loans included low interest rates, others more than 1% per month. In 1840, for example, Tomás Eldudy lent 1,100 *pesos* (the *peso* was the monetary unit of Peru before 1863) to the brothers Manuel and Carmen Palomino to invest on their chakra «Vicentela», just outside Lima; the loan would be repaid within a year, paying a 2% monthly interest rate. Five years later, Juan Bautista and Adam Buter loaned 570 *pesos* to Deonísio Márquez for two months, using a *fanegada* of land and a house in the valley of Chíncha Alta as securities. In February of 1863, Manuel Galup loaned 3,000 *pesos* to Agustín del Mazo, to be paid in six months, securing the loan with the *hacienda* Caucato. In April of 1865, Paula Benavides e Hijos loaned 17,900 *pesos* to José Boza to be paid in four years at 0.75% per month, using the *hacienda* Macacona as collateral.

Received: 2012-12-07 • Revised: 2014-04-08 • Accepted: 2014-09-12

Luis Felipe Zegarra is professor of Economics at CENTRUM Católica, the Graduate Business School of Pontificia Universidad Católica del Perú (PUCP). Address: Calle Daniel Alomía Robles, Los Alamos de Monterrico, Santiago de Surco, Lima (Peru). E-mail: lfzegarrab@pucp.edu.pe

In 1866, the first mortgage bank (*Banco de Crédito Hipotecario*) was created. Three years later, another mortgage bank (*Banco Territorial Hipotecario*) was also chartered. There was much hope on the role of mortgage banks. García-Calderón (1868), for example, argued that soon after the creation of the *Banco de Crédito Hipotecario*, the territorial property would be transformed and would have a much greater importance.

The appearance of these banks, specialised in mortgage credit, may have constituted an important contribution to the development of credit markets. In fact, some historians have pointed out that mortgage banks had a positive effect on Peruvian agriculture. Camprubí (1957) argues that mortgage banks contributed to the expansion of coastal exporting agriculture. Likewise, Engelsen (1978) argues that farmers, especially large *hacendados*, had access to cheaper credit as a result of the creation of mortgage banks¹.

This article analyses the experience of Peru in the period 1840-80 to determine the impact of the creation of mortgage banks on the agricultural sector². Relying on a sample of notarial records, the article shows that mortgage banks made loans in better conditions to large landowners: loans granted by these banks had longer maturity and meant larger amounts than those granted by private lenders. On the other hand, consistent with the optimistic view of several authors, the article shows that total mortgage credit increased substantially due to the creation of mortgage banks. However, the evidence shows that banking activity declined substantially from the mid-1870s. Long-term investment, especially in sugar and cotton production, may have been promoted during the years of the credit boom. The evidence, however, is far from conclusive.

Banking theory establishes that banks, as financial intermediaries, may play a key role in credit markets³. In the absence of mortgage banks, private lenders may make mortgage

1. Commercial banks also operated in Peru during this period. However, these banks largely focused on discounting notes and opening current accounts, i.e. providing short-run credit. Commercial banks were created from 1863, but their role in long-term credit was probably limited. According to CAMPRUBÍ (1957), for example, their operations (as it was usual with commercial banks) were highly concentrated in discounting commercial notes and advances in current account. In addition, we will show in this article that commercial banks accounted for a very low percentage of the total number of loans and value of new mortgage loans in the 1860s and 1870s.

2. The ending year is 1880 because the War of the Pacific (1879-83) led to the destruction of several urban and rural estates and the bankruptcy of most banks, including the two mortgage banks that were created in the 1860s and 1870s.

3. The literature has long established the important role of financial intermediaries for the development of credit markets. Several studies argue that financial intermediaries exist due to transaction costs (BENSTON and SMITH, 1976), liquidity insurance (BRYANT, 1980; DIAMOND and DYBVIK, 1983), information asymmetries (LELAND and PYLE, 1977) and delegated supervision (DIAMOND, 1984). The lack of financial intermediaries makes it difficult and costly for investors to find savers who can

loans, i.e. they may channel funds into farmers and landowners, using rural estates as collateral. However, in that case, lending may be largely based on personal connections: farmers and landowners will need to know savers in order to obtain funding for their investment projects. In contrast, in an economy with mortgage banks, it may be easier for landowners to find funding, especially long-term funding, for their investment projects.

This article constitutes a contribution to the literature on the history of Latin American agriculture and banking. While only a few studies on the role of mortgage banks in Latin American agriculture have been conducted and they mostly refer to Mexico and Brazil, other countries in the region have been almost neglected⁴. In addition, this article contributes to understanding the role of banks on agriculture during the boom of guano, a very special period in Latin American economic history. The boom of guano of Peru in the mid-19th century is one of the fastest and most sustained economic growth's periods in Latin American history. The literature has paid much attention to this period on a variety of aspects, but not on the role of mortgage banks on agriculture⁵. Finally, the article relies on a sample of notarial records and other sources. Notarial records have been proved extremely useful for studying early credit markets in other countries. However, although notarial records are available for the 19th-century Peru, credit markets during the important guano era and certainly the importance of mortgage banks have not received much attention in the literature⁶.

provide them with external funds. Mortgage banks are particularly important for the provision of long-term credit by matching long-term savers with investors in need of long-term funds. On the other hand, several authors argue that property rights are crucial for the development of credit markets (LA PORTA, LÓPEZ-DE-SILANES, SHLEIFER and VISHNY, 1997, 1998, 2000; DEMIRGÜC-KUNT and MAKSIMOVIC, 1998).

4. LEVY (2012) analyses the credit market of Yucatan, Mexico, in the 19th century. RAGUZZI (2002) studies the evolution of mortgage credit in Mexico in the late 19th century. For Brazil, HANLEY (2005) examines the role of banks, including mortgage banks, on the development of Sao Paulo's economy.

5. Several studies deal with the nature of the guano business (BONILLA, 1974), the evolution of exports and the impact of commercial expansion on income levels (HUNT, 2012), the evolution of banks, especially commercial banks (CAMPRUBÍ, 1957), and the impact of such rapid economic growth on inflation (GOOTENBERG, 1990).

6. In the last decades, notarial records have been used for studying credit markets (HOFFMAN, POSTEL-VINAY and ROSENTHAL, 1992; REDISH, 2003; BEVERIDGE, 1985; QUINN, 2001; Levy, 2012). For Peru some studies have dealt with credit markets in the 19th century, but not with the impact of mortgage banks; while ZEGARRA (2013a) examines the impact of banking on total credit in Lima, ZEGARRA (2013b) explores the effect of political instability on credit markets between 1835 and 1865, and ZEGARRA (2014) examines the impact of gender and property rights on credit markets. Suárez also relied on notaries' data but to study credit markets in Peru in colonial times. CAMPRUBÍ (1957) analysed the evolution of commercial banks in the guano era. Only ENGELSEN (1978) examines the importance of mortgage banks for coastal agriculture in Peru during the guano era. Other studies have dealt with exports, economic growth and prices for the same period (BONILLA, 1974; HUNT, 2012; GOOTENBERG, 1990).

The structure of the article is as follows. Section 2 discusses the notarial records. Section 3 examines the evolution of the agricultural sector in the 19th century. Section 4 assesses the evolution of mortgage banks. Section 5 analyses the conditions of the loans granted by the two mortgage banks. Section 6 discusses the possible impact of mortgage banks on investment and production in the agricultural sector. Section 7 concludes.

2. NOTARIAL RECORDS

Notarial records constitute a rich source of information on mortgage credit markets in 19th-century Peru. The importance of notarial records for the study of mortgage credit market in Peru lies upon the fact that the Civil Code of 1850 dictated that mortgages could only be constituted by registration in a notary (by *escritura pública*), indicating the main obligation and the goods employed as collateral⁷. Nowadays, notarial archives are kept in the National Archives of Peru (*Archivo General del Perú*).

Other types of loans were also granted in this period. Banks of issue and discount, for example, granted commercial loans. Commercial credit also existed in this period. However, information on non-mortgage loans is highly limited. Our sample exclusively refers to mortgage credit secured with rural estates.

In particular, the study relies on a sample of 272 notarised contracts for the period 1840-75. In particular, I selected the following years: 1840, 1845, 1850, 1855 and 1860-75. I also collected information for every year in 1860-75 to capture the effects of the creation of mortgage banks. Analysing the data for 1840, 1845, 1850 and 1855, however, may be useful for confirming the characteristics of loans granted by private lenders. For 1840-55, however, there were no many loans. Most loans correspond to 1860-75 (Table 1).

TABLE 1
Number of loans in the sample

| | 1840-1855 | 1860-65 | 1866-70 | 1871-75 | Total |
|-----------------|-----------|---------|---------|---------|-------|
| Private lenders | 9 | 61 | 67 | 38 | 175 |
| Mortgage banks | 0 | 0 | 33 | 64 | 97 |
| Total | 9 | 61 | 100 | 102 | 272 |

Source: National Archives of Peru. See text in this section for additional references. Own elaboration.

7. In addition, mortgages had to be registered in the Office of Mortgages.

I constructed this sample from notarial records kept in the National Archives of Peru. I selected the following notaries: José de Selaya, Felipe Orellana, Francisco Palacios, Félix Sotomayor, Ignacio Ayllón and Jose Ayllón. José de Selaya covers the entire period and Felipe Orellana, Francisco Palacios and Félix Sotomayor cover most of the period. In addition, I included data from Ignacio and José Ayllón to increase the number of observations for the 1840s and 1850s. From all these notaries, I collected all contracts under the title of *obligaciones*, *mutuos* or *hipotecas* from January to May. From those contracts, I selected new mortgage loans secured with rural estates. The sample was then reduced to 272 contracts. Around 64% of those loans correspond to private lenders and 36% to mortgage banks.

The sample accounts for an important portion of the population of notarial contracts in the city of Lima. According to our calculations, for example, between January and May of 1860, all notaries from Lima registered 335 contracts under the title of *obligaciones*, *mutuos* or *hipotecas*; the notaries of Selaya, Orellana and Palacios accounted for 98 of those loans. For 1870, all notaries from Lima registered 193 loans between January and May, and the three notaries studied here registered 135.

The contracts include information on the names of the lenders and debtors and the amount of the loan. In addition, most loans include the maturity of the loan, the interest rate, and a description of the mortgaged property. Some contracts also include the actual last date of payment and the purpose of the loan. For this article, it is of particular importance the information on loan sizes, loan maturity, and interest rates.

3. AGRICULTURE AND LIVESTOCK

Soon after independence, the agricultural and livestock sectors were leaving a period of depression behind. Piel (1970) indicates that between 1820 and 1850 the production of most agricultural products grew very slowly. In particular, the production of important crops in the southern sierra during the first half of the 19th century was hindered by the decline in the mining production in Bolivia. In addition, as Hunt (2012) indicates, the production of *aguardiente*, a kind of liquor, from Moquegua, wheat from Arequipa and *bayetas*, a type of textile, from Cuzco lost its main market in the south⁸. In the central sierra, Cerro de Pasco demanded agricultural products from the valleys in Huánuco, Jauja and Huaraz. However, trade could not prosper if Cerro de Pasco did not prosper⁹.

8. HUNT (2012: 89-90).

9. HUNT (2012: 90).

Foreign investment was usually limited to foreign trade. According to Piel (1970), the only concern among foreign commercial agents was to maintain their trade activities, not to invest in long-term projects. «*After 1836, wherever a form of production existed that required little or no investment at all, there was a prospect of economic improvement*»¹⁰. That was the case of wool exports, produced in the highlands. Exports of alpaca wool increased from less than 100 tons per year in 1830-35 to 1,207 tons in 1845. Wool was indeed the main export product in the early Republic of Peru. In 1839, after gold and silver, wool was the main export¹¹.

In the meantime, plantation agriculture in the coast went through a severe crisis. According to Piel (1970), «*the problem was that, in contrast to the conditions in the sierra, the landowner had to invest in the land before being able to obtaining anything from it. Aided by British finance some did make this attempt immediately after Independence*»¹², but these attempts were usually unsuccessful. Cotton and sugar production, two main agricultural products in the coast, then remained stagnant. In 1830-40, sugar exports were around 1,610 tons per year. In the following 15 years, sugar exports remained below 3,000 tons. Meanwhile, cotton exports remained below 800 tons per year in 1830-66. The evidence does not show a clear upward or downward long-term trend: cotton exports were 21 tons in 1830, 440 tons in 1840, 126 tons in 1850.¹³ In the words of Piel (1970):

*The crisis of the plantations, which had already started towards the end of the eighteenth century after the expulsion of the Jesuits and the secularization of their estates, had become a solid fact. The War of Independence and the shortage of capital caused the traditional relations of production on the coastal estates to gradually disintegrate. In more than one place, Negro slaves escaped from their bondage in the confusion of the War of Independence and of the civil wars between factions and military caudillos after 1830*¹⁴.

In the case of the sugar industry, the lack of markets also affected the growth of exports. Hunt (2012) indicates that sugar production increased in the late colonial period, dominating the Chilean market, and penetrating the markets of Argentina and Ecuador. By the mid-1830s, sugar exports regained their level from four decades earlier due to the exportation to Chile¹⁵. In the following years, however, the level of sugar exports remained

10. PIEL (1970: 121).

11. YEPES (1971: 47).

12. PIEL (1970: 122).

13. The figures on sugar and cotton exports come from HUNT (2012).

14. PIEL (1970: 122).

15. From 1861 sugar and cotton were mainly exported to European markets. As a result, sugar and cotton exporters had now larger markets to sell their products.

stagnant due to the lack of markets. The scarcity of supply factors, however, also affected the growth of the sugar industry. Whereas arable land was abundant in coastal valleys, the «lack of arms» appeared as an obstacle to production. Slaves constituted an important source of labour until their emancipation in 1854, but the source of labour was limited by the prohibition to import slaves decreed in the early 1820s¹⁶.

Similarly, the international conditions favoured the cultivation of sugar in Peru between 1861 and 1878. «*Soil exhaustion, and bloody slave rebellions in the West Indies in the Caribbean, the most important sugar producing area in the world at that time, stimulated high sugar world prices*»¹⁷. The wholesale price of sugar was 9.8 cents per pound in 1856 and nine cents in 1860. It then increased to 21 cents in 1865 but then declined to 13.5 cents in 1870 and 10.7 cents in 1875¹⁸. Sugar exports were 1,623 tons in 1845, 1,149 tons in 1855 and 1,463 tons in 1865; from 1866, however, exports increased substantially: sugar exports were 13,175 tons in 1870, 55,549 tons in 1875 and 83,497 tons in 1879.

International conditions favoured the cultivation of cotton in Peru. The Civil War in the United States (1861-65) led to a decline in cotton production in the U.S. southern states and an increase in prices. The wholesale price of cotton raw was 10.4 cents per pound in 1855 and 11 cents in 1860. During the Civil War it reached 1.01 dollars in 1864. The price then declined to 25 cents in 1867, 24 cents in 1870 and 15 cents in 1875¹⁹. Therefore, cotton prices increased substantially in the early 1860s but declined soon after the end of the war. As Engelsen (1978) indicates, «*traditionally cotton producing areas, such as Algeria, and especially Egypt, expanded their exports to Europe. In Latin America, cotton cultivation expanded in several areas, such as Northern Brazil, Tropical Mexico, Colombia and coastal Peru*»²⁰. Cotton exports then increased in the late 1860s and 1870s: cotton exports increased from 291 tons in 1860 to 1,541 tons in 1870, 3,375 tons in 1875 and 3,609 tons in 1879.

Other factors also facilitated the expansion of sugar and cotton exports. First, the immigration of coolies allowed *haciendas* to solve the scarcity of labour. In addition, transportation costs declined during this period. Lower transportation costs obeyed to the faster and more reliable shipping methods²¹. At least as importantly, the increase in exports prices, although temporary, probably encouraged *hacendados* to invest in their *haciendas*.

16. HUNT (2012: 91-92).

17. ENGELSEN (1978: 102).

18. Sugar prices come from U.S. DEPARTMENT OF COMMERCE (1978).

19. Cotton prices come from U.S. DEPARTMENT OF COMMERCE (1978).

20. ENGELSEN (1978: 102).

21. ENGELSEN (1978: 103).

As we will show, mortgage banks made long-term loans in large amounts, allowing *hacendados* to invest large sums of money in their estates. Indeed, the volume of production of cotton and sugar increased and remained high after the decline in prices in the late 1870s, suggesting that *hacendados* invested large sums of money.

The War of the Pacific (1879-81), and especially the incursions of the Chilean Army in the Peruvian territory, led to the destruction of several *haciendas*. As Pike (1976) indicates, Chileans «engaged in a systematic destruction of the Peruvian agricultural and economic potential built up in the preceding period. The occupiers exacted taxes from the larger landlords and dismantled the equipment of the haciendas and sent it to Chile; those *hacendados* who proved recalcitrant had their homes dynamited»²². As a result, cotton exports declined from 3,609 tons in 1879 to 1,612 tons in 1884, remaining below 4,000 tons until 1889. Similarly, sugar exports declined from 83,497 tons in 1879 to 34,307 in 1884, remaining below 80,000 until 1897.

4. MORTGAGE BANKS

By 1860, prior to the creation of mortgage banks, landowners had access to mortgage credit. Private lenders loaned funds using estates as collateral under a variety of interest rates and maturity levels. Farmers obtained credit even before the creation of mortgage banks under a variety of conditions.

The legislation that regulated those loans was the civil code, which included a section on mortgages. The civil code indicated that the payment of the loan had to be done within the maturity indicated in the contract. However, it was not very specific on the length of the process of repossessing collateral. In 1866, the Secretary of *Hacienda* Manuel Pardo argued that one of the causes that prevented the available financial capital from being lent to real-estate owners was the excessive legal protection of borrowers²³. In addition, García-Calderón (1868) indicated that the judicial process for repossessing collateral in case of default (executive trial) could take a long time and the outcome was uncertain²⁴. If these perceptions about the weaknesses of property rights are valid, and personal lenders property rights were weak, those lenders may then have found it very risky to make loans, especially in large amounts and for a long time. In case a borrower defaulted, the lender probably had to face a long process to repossess collateral.

22. PIKE (1976: 128).

23. Official document from the Secretary of *Hacienda* Manuel Pardo to the Tribunal del Consulado, February 3 1866 (CAMPRUBÍ, 1957: 56).

24. GARCÍA CALDERÓN (1868: 16).

In 1866, the government chartered the *Banco de Crédito Hipotecario*. The main shareholders of this bank were reputed private lenders, merchants and *hacendados*²⁵. The charter regulated the operations of the mortgage bank, clearly specifying its rights and obligations. The mortgage bank would start business with a capital of one million *soles* and would issue mortgage bonds. Total issue of bonds, however, could not exceed four times the capital stock. Also, the bank would grant loans for no more than twenty years, the bank could charge no more than a certain fixed interest rate²⁶, loans could not be of less than 500 *soles*, and the size of loans could not exceed twice the value of the mortgaged estates.

The charter imposed some restrictions on the use of loans probably for reducing the risk of default. It established that the bank could only grant loans secured with real estate and that the purpose of the loan would be the payment of previous mortgages, the purchase of real estate, and/or the investment (improvement) in the property. In addition, loans could only constitute first mortgages, so the bank had the priority over all other claims on the mortgaged properties in the event of default.

The charter included several privileges, apparently intended to overcome the weaknesses of the general legislation. Importantly, the charter established the steps needed toward the repossession of collateral in case of default. If, having been judicially requested, the debtor did not pay the three-monthly quota or quotas within the period of thirty days, the bank could request the repossession of the mortgaged property or its foreclosure. Once the bank showed that the debtor did not meet his obligation, the repossession of the property would be ordered by the judge within a period of thirty days. The resolution of the judge would be executed immediately regardless of a possible appeal, and the judge would mandate the foreclosure of the estate in case the bank requested it.

In 1869, the second mortgage bank was created, the *Banco Territorial Hipotecario*, under the same legal conditions as the first mortgage bank. The creation of this bank also generated great expectations in 1870. The shares of the bank were sold with a premium of 10% over the nominal value. In this case, the main shareholders were also reputed mer-

25. Some of them were Buenaventura Elguera, Ramón Montero, Juan Manuel Montes, Manuel Montero, José Vicente Oyague (and his brother), Pedro Denegri, Delgado, Hermanos e Hijos, Carlos Gonzales de Cándamo, Juan Mariano Goyeneche y Gamio, José Canevaro e Hijos, Antonio Joaquín Ramos and Sescou Valdeavellano y Cia. The first Board of Directors of the Banco de Crédito Hipotecario was formed by José Domingo Castañeda, Pedro Denegri, Dionisio Ortiz de Villate, José Barrón (*El Comercio*, August 17 1866), and the first Manager was José de la Riva Agüero (CAMPRUBÍ, 1957). Pedro Denegri and the Gonzales de Cándamo family had already participated in the credit market as private lenders. The companies Delgado, Hermanos e Hijos, José Canevaro e Hijos, and Valdeavellano y Cia had already loaned important amounts of money for several borrowers.

26. The borrower would pay twenty annuities equivalent to 12% of the loan, payable by trimester.

chants and private lenders²⁷. Since the main shareholders of the two mortgage banks were merchants, it seems that mortgage banks became a mechanism to channel funds from commerce into the agricultural sector.

The evidence indicates that total credit by the two mortgage banks increased substantially in the late 1860s and early 1870s. According to the yearbooks or *memorias* from the *Banco de Crédito Hipotecario*, this bank made 71 loans in 1867, 39 in 1868 and only three in 1875. The amount of new loans was 1.26 million *soles* in 1867, 994 thousand *soles* in 1868 and 172 thousand in 1875. According to the bank's balance sheets, outstanding credit was 2.1 million *soles* in 1868, 5.9 million in 1871, 10.2 million in 1874 and 11.9 million in 1875. In the case of the *Banco Territorial Hipotecario*, outstanding loans reached more than 3 million *soles* in 1875.

From the mid-1870s, however, the volume of credit by mortgage banks declined. Information from balance sheets indicates that outstanding credit by the *Banco de Crédito Hipotecario* declined from 11.9 million *soles* in 1875 to 11.3 million in 1876 and 11 million in 1877, whereas outstanding credit by the *Banco Territorial Hipotecario* declined from 3.3 million *soles* in 1874 to 3.2 million in 1875, 3 million in 1876 and 2.3 million in 1877. By the end of 1878, the *Banco de Crédito Hipotecario* reduced its capital from 3 million *soles* to 2 million *soles*.

Information from our sample for rural loans shows a similar trend. Figure 1 depicts the evolution of loans secured with rural estates. The total amount of rural loans by mortgage banks clearly increased in the early 1870s, but then declined substantially after 1874.

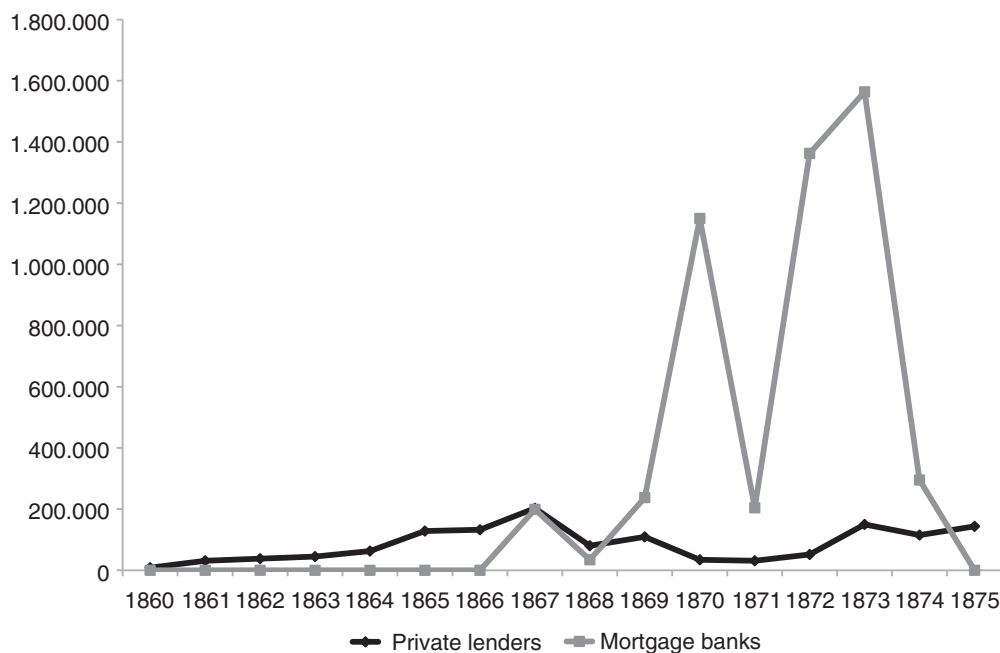
Two factors may explain the decline in credit activity. First, the decline in guano exports and liquidity probably led to a decline in the supply of funds. Second, the liquidity problems faced by banks of issue may have reduced the confidence on banking institutions. In fact, mortgage banks were more affected by economic and monetary disturbances than private lenders. As Zegarra (2013a) indicates, as mortgage banks slowed down their operations, private lenders regained some market share. Some debtors even decided to repay their loans with the mortgage banks by borrowing from private lenders²⁸.

27. The first Board of Directors of the Banco Territorial Hipotecario, for example, was formed by Buenaventura Elguera, Francisco García Calderón, José Amancio Castillo, Domingo Laos and Antonio Araoz; whereas the Manager was Enrique Perla (CAMPRUBÍ, 1957: 85).

28. In September 1875, for example, Jose María Perla, Gregoria Perla, Manuela Perla, José Noriega and Isabel Noriega borrowed 5,000 *soles* from Martín Pío Otero to take advantage of the «low price» of the mortgage bonds and repay a loan to the *Banco de Crédito Hipotecario* (Notary of Felipe Orellana, Protocolo 523, Folio 1471).

As the prospects of the Peruvian economy were uncertain, it is plausible that savers did not opt for investing in assets with a long-term maturity. By law, mortgage banks made loans for twenty years and the actual duration was around nine years; whereas private lenders had usually offered loans with a maturity of one or two years. The law offered a special protection to mortgage banks, so in normal circumstances the public may have rather trusted mortgage bonds. However, as the Peruvian economy faced a period of uncertainty, the public may have experienced a special distrust for investing in mortgage bonds, and purchasing mortgage bonds may have not been considered a safe investment anymore²⁹. In addition, there might have been a systemic lack of trust on financial intermediaries as a result of the deep financial problems faced by banks of issue and discount. As banks of issue entered into a deep crisis, a systemic crisis of lack of trust on Banking institutions may have affected mortgage banks³⁰.

FIGURE 1
Mortgage credit to landowners (soles)



Source: National Archives of Peru. See section 2. Own elaboration.

29. As the discount of mortgage bonds after 1873 increased and thus the interest rates charged by the two banks increased, a number of individuals and companies may have preferred borrowing from private lenders.

30. For a broad discussion on the causes of the banking crisis of the mid-1870s, see CAMPRUBI (1957).

With the War of the Pacific (1879-83) and the destruction of urban estates in Lima and *haciendas* in the coast, a large number of clients of the two mortgage banks probably faced the impossibility of repaying their loans. The *Banco de Crédito Hipotecario* suspended its activities in 1881, during the occupation of Lima by the Chilean Army; a few years later, it entered into liquidation. The *Banco Territorial Hipotecario* followed the same process.³¹

5. LOAN CONDITIONS

Mortgage banks offered important sums of money in the late 1860s and early 1870s. By relying on a sample of notarised loans, this section shows that mortgage banks offered better loan conditions to landowners (especially large landowners) than private lenders. I will focus on three aspects: interest rates, maturity and loan sizes.

Some historians have argued that mortgage banks charged lower interest rates than private lenders³². Engelsen (1978), for example, argued that landowners paid 1.5% or 2% per month to private lenders, and that mortgage banks charged much lower rates. A look at our sample of notarised loans, however, shows that mortgage banks did not necessarily charge lower interest rates. Mortgage banks borrowers had to pay twenty annuities, payable in four parts, every three months, and that each annuity could not be higher than 12% of the loan. Our analysis of the data shows that the two banks always charged the maximum possible interest rate, i.e. an annuity of 12% of the loan. The two banks, however, did not provide gold or silver (*specie*) to borrowers: they gave mortgage bonds to their borrowers, which could be exchanged for cash in the market. By 1866, the bonds of the *Banco de Crédito Hipotecario* could be exchanged for cash with a 12% discount³³. In 1867 the discount was still 12%, but in 1868 the discount was only 4%³⁴. Without discount, the effective interest rate charged by the mortgage banks was 0.87% per month or 10.9% per year. With a discount of 10%, the effective interest rate was 0.99% per month or 12.67% per year; whereas with a discount of 12%, the effective interest rate was 1.03% per month or 13.06% per year.

Compare these rates to those by private lenders. In average, the annual interest rate charged by private lenders was 16.2% in 1840-55, 11.1% in 1860-65, 13.5% in 1866-70 and 14% in 1871-75. In 1860-75, around 23% of loans charged an annual interest rate

31. CAMPRUBÍ (1957: 414-415).

32. CAMPRUBÍ (1957); ENGELSEN (1978).

33. CAMPRUBÍ (1957: 63).

34. BANCO DE CRÉDITO HIPOTECARIO (1869).

of 10% or less and only 17% of loans included interest rates above 15% (Table 2). Therefore, our sample suggests that a reduction in interest rates occurred in the 1860s, prior to the creation of mortgage banks. Mortgage banks did not necessarily offer lower interest rates than private lenders. Mortgage banks may have offered better loan conditions than private lenders to some landowners. But those better conditions did not necessarily include lower interest rates.

TABLE 2
Interest rates charged by private lenders

| | 1840-55 | 1860-65 | 1866-70 | 1871-75 |
|--|---------|---------|---------|---------|
| Average interest rate (%) | 16.2 | 11.1 | 13.5 | 14.0 |
| Distribution of loans (% of number of loans) | | | | |
| Up to 10% | 11.1 | 34.4 | 17.9 | 13.2 |
| More than 10% and up to 15% | 22.2 | 45.9 | 53.7 | 47.4 |
| More than 15% and up to 20% | 22.2 | 6.6 | 14.9 | 7.9 |
| More than 20% | 11.1 | 1.6 | 7.5 | 10.5 |
| Missing | 33.3 | 11.5 | 6.0 | 21.1 |
| Number of observations | 9 | 61 | 67 | 38 |

Source: National Archives of Peru. See section 2. Own elaboration.

One of the positive consequences of the creation of mortgage banks was that these banks granted loans with a much longer maturity than private lenders. According to all notarised contracts in our sample, the two mortgage banks always made loans for twenty years. In contrast, private lenders usually made loans with a maturity of less than five years (Table 3). In average, rural loans had a maturity of 1.5 years in 1840-55 and 1.7 years in 1860-75 (Figure 2). Moreover, in 1860-75 around 79% of the loans secured with rural estates had a maturity of two years or less, and only 2% consisted of loans of more than five years³⁵. A large number of loans by private lenders had a few months of maturity³⁶.

35. Similarly, loans by commercial banks were usually to be paid in less than five years.

36. In January of 1863, for example, Manuel Arrias loaned 1,400 *pesos* to Cipriano Roman, secured with the *hacienda* Santa Clara. The loan had a maturity of only eight months. One month later, Manuel Galup made a loan of 3,000 *pesos* to Agustín del Mazo secured with his capital goods in the *hacienda* Caucato. The loan had a maturity of six months. In February of 1870, Carlos Morales made a loan of 350 *pesos* to Maria Tomassi to be paid in only one month. The loan was secured with the debtor's rights on the *hacienda* Santa Ana in the province of Huarochiri. Other loans had a maturity of more than one year but the maturity was still far below twenty years. In March of 1864, Santiago Chaparro made a loan of 2,000 *pesos* to Eduardo Rojas, secured with the debtor's *chacra* «Zarate» in the valley of Lurigancho. The loan was to be paid in two years and seven months. In January of 1867 Felipe Barrera loaned 20,000 *pesos* to Manuel Lorenzo de las Casas to be paid in two years. The loan

TABLE 3
Maturity of loans granted by private lenders

| | 1840-55 | 1860-65 | 1866-70 | 1871-75 |
|--|---------|---------|---------|---------|
| Distribution of loans according to maturity (percentage) | | | | |
| Up to 1 year | 62.5 | 60.0 | 62.3 | 51.6 |
| More than 1 and up to 2 years | 25.0 | 20.0 | 23.0 | 12.9 |
| More than 2 and up to 5 years | 12.5 | 20.0 | 13.1 | 29.0 |
| More than 5 and up to 10 years | 0.0 | 0.0 | 1.6 | 6.5 |
| More than 10 years | 0.0 | 0.0 | 0.0 | 0.0 |
| Average maturity/time (years) | 1.50 | 1.64 | 1.62 | 2.11 |
| No. Observations | 8 | 55 | 61 | 31 |

Note: the number of loans is not 175, because some loans do not include information on maturity

Source: National Archives of Peru. See section 2. Own elaboration.

FIGURE 2
Private lenders: loan maturity of total loans (years)



Source: National Archives of Peru. See section 2. Own elaboration.

was secured with the *hacienda* La Huaca in the province Chancay. In April of 1867 Josefa Marticorena de Ronco made a loan of 2,000 *pesos* to Manuel Torcelledo. The loan was secured with the debtor's *hacienda* San Borja and with a maturity of two years.

These differences in maturity levels between mortgage banks and private lenders may have been important for the development of agriculture. Long-term investment probably required long-term loans, not loans to be repaid in a few months. Therefore, by assuring long-term funds, mortgage banks may have facilitated long-term investment.

TABLE 4
Loan sizes of private lenders and mortgage banks

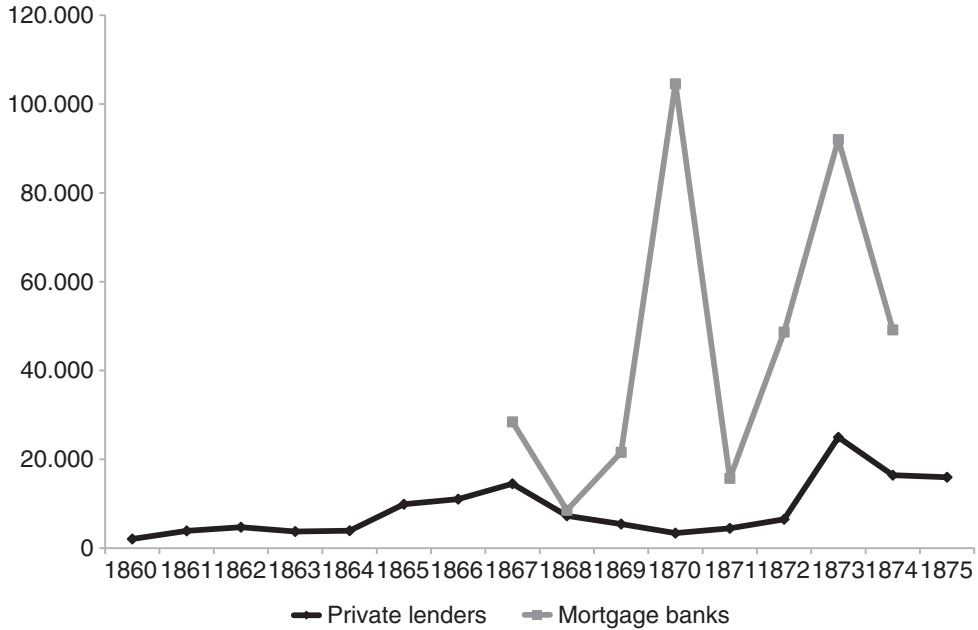
| | 1840-55 | 1860-65 | 1866-70 | 1871-75 |
|---|---------|---------|---------|---------|
| Private lenders | | | | |
| Distribution of loans (% number of loans) | | | | |
| Up to 1,000 <i>soles</i> | 33.3 | 29.5 | 22.4 | 21.1 |
| More than 1,000 and up to 2,000 <i>soles</i> | 11.1 | 18.0 | 14.9 | 21.1 |
| More than 2,000 and up to 5,000 <i>soles</i> | 22.2 | 23.0 | 22.4 | 7.9 |
| More than 5,000 and up to 10,000 <i>soles</i> | 33.3 | 13.1 | 17.9 | 15.8 |
| More than 10,000 <i>soles</i> | 0.0 | 16.4 | 22.4 | 31.6 |
| Average size (<i>soles</i>) | 4,178 | 5,146 | 8,343 | 13,298 |
| No. Observations | 9 | 61 | 67 | 38 |
| Mortgage banks | | | | |
| Distribution of loans (% number of loans) | | | | |
| Up to 1,000 <i>soles</i> | | | 0.0 | 1.6 |
| More than 1,000 and up to 2,000 <i>soles</i> | | | 0.0 | 1.6 |
| More than 2,000 and up to 5,000 <i>soles</i> | | | 9.1 | 15.6 |
| More than 5,000 and up to 10,000 <i>soles</i> | | | 27.3 | 15.6 |
| More than 10,000 <i>soles</i> | | | 63.6 | 65.6 |
| Average size (<i>soles</i>) | | | 49,121 | 53,530 |
| No. Observations | | | 33 | 64 |

Source: National Archives of Peru. See section 2. Own elaboration.

In addition, mortgage banks granted loans for much larger amounts than private lenders (Figure 3). The evidence indicates that mortgage banks made in average much larger loans than private lenders. Among loans secured with rural estates, the average size of mortgage loans in 1866-75 was 52,030 *soles* for mortgage banks. Among private lenders, the average loan size was 4,178 *soles* in 1840-55, and 8,272 *soles* in 1860-75. A deeper look into the distribution of sizes confirms that mortgage banks made larger loans than private lenders. In the case of private lenders, in 1860-75, 25% of loans were for 1,000 *soles* or less, 18% were for an amount between 1,000 and 2,000 *soles*, and only 22% consisted of loans of more than 10,000 *soles* (Table 4). In the case of mortgage banks, around 65%

of loans were for more than 10,000 *soles*, and only 1% of loans were for 1,000 *soles* or less³⁷.

FIGURE 3
Average loan size of rural loans (*soles*)



Source: National Archives of Peru. See section 2. Own elaboration.

The fact that mortgage banks made loans in better conditions than private lenders is consistent with the fact that a significant portion of mortgage banks' loans were intended to

37. In March of 1870, for example, Demetrio Olavegoya obtained 53,000 *soles* from the *Banco de Crédito Hipotecario* to pay some mortgage loans secured with two properties: a house in Lima and a *hacienda* in the province of Jauja. By February of 1873, Antonio Fernandez had obtained several loans for a total amount of 340,000 *soles* from the same mortgage bank secured with four *haciendas* in the province of Cañete at the South of Lima. The brothers Carlos and Domingo Elias obtained loans from the *Banco de Crédito Hipotecario* for 80,000 *soles* and 20,000 *soles* in February and May of 1873 to invest in their *fundo* Oja Redonda in the valley of Chinchá Baja. Similarly, in January of 1873 the *Banco Territorial Hipotecario* loaned 800,000 *soles* to the Society Flores Hermanos, Carranza y Cia, secured with its *haciendas* Tulape, San José, Cepeda, La Victoria, Griselda and Ascope in the valley of Chicama.

repay previous debts³⁸. Several landowners therefore substituted private lenders loans for mortgage banks loans³⁹.

In summary, mortgage banks offered better conditions than private lenders to a number of landowners (at least to large landowners) and may therefore have promoted the growth of the agricultural sector. First, mortgage banks made loans for longer periods, which may have been crucial for investing in agriculture. Second mortgage banks made loans for large amounts, which may have been important for making large-scale investments in agriculture.

6. MORTGAGE CREDIT, INVESTMENT AND AGRICULTURAL GROWTH

Historians and economists have argued that mortgage banks had an important influence on agricultural growth. Regarding the first few months of operation of the *Banco de Crédito Hipotecario*, García-Calderón (1868) argued that:

[...] land owners and agriculture, which before the creation of the bank could not find capital, have received more than one and a half million pesos since it was founded. Such large amount employed on improving the farms and redeeming them for previous charges contributes on the one hand to the progress and development of agriculture and on the other allows landowners to acquire the full domain of them⁴⁰.

Half a century later, Garland (1905) argued that:

38. Without those funds, *hacendados* would have not been able to invest in their own estates or the estates would have been repossessed by banks, which in turn would have sold them out. In the meantime, however, that land would have been underutilised.

39. In January of 1869, for example, the *Banco de Crédito Hipotecario* loaned 24,000 *soles* to José Fidel Gereda to repay previous *censos* that affected his *hacienda* San Miguel de Cóndor in the valley of Cóndor in Pisco. In March of 1869, the *Banco de Crédito Hipotecario* made of loan of 9,000 *soles* to José Gregorio Benavides to repay two mortgages. The loan was secured with the *fundo* Cueva in the valley of Magdalena. In March of 1871, the *Banco de Crédito Hipotecario* made a loan of 20,000 *soles* to Trinidad Guerra and Isabel Carrasco, both from Piura, to repay previous debts. Those debts were secured with their *fundo* «Salitral» in Piura. In May of 1871, the *Banco de Crédito Hipotecario* made a loan of 8,000 *soles* to José Puche to redeem *censos* that affected the debtor's *fundos* San Pedro and Viñas. In March of 1873 the *Banco de Crédito Hipotecario* loaned 60,000 *soles* to Juan Manuel del Valle to repay debts that affected his *fundo* Montejo in the valley Chicama.

40. GARCÍA-CALDERÓN (1868: 92). The original text in Spanish is: «la propiedad territorial y la agricultura, que antes de la creación del Banco no podían encontrar capitales, desde que este se fundó han recibido más de un millón y medio de pesos. Tan fuerte suma empleada en mejorar los fundos y

*[... the wealth] coming from the national and international trade, then at its peak, to landowners, as well as the banks of issue and especially mortgage banks, allowed the owners of rural estates to rapidly transform their lands into large sugarcane estates, endow them with valuable machinery, and establish the necessary number of Chinese workers on their estates*⁴¹.

Similarly, Dancuart (1905) argued that the *Banco de Crédito Hipotecario* effectively favoured «*the agriculture of this country, which was also suffering from the rigors of the scarcity of capital and had to accept onerous conditions to obtain it*»⁴². Meanwhile, Camprubí (1957) argued that in the case of the *Banco de Crédito Hipotecario*:

*[...] its favorable influence had immediate effect, mainly in the rural property, which nearly doubled its value, and in sugar production, stimulating it... Most importantly, the bank came to meet an urgent and long-felt need for the onerous charges supported by urban and rural property and for their precarious conditions ... Its involvement not only meant the progress of landowners and the effective initiation of the restructuring of the very onerous mortgage charges which weighed on it as a result of usury (up to 18%), but a greater agricultural activity, which influenced the gradual increase in customs revenues*⁴³.

Does the statistical evidence support those views? The evidence suggests that the creation of mortgage banks led to a significant increase in the total volume of mortgage credit. The creation of mortgage banks constituted an important change in the mortgage credit market. From our sample, private lenders made 128 thousand *soles* in new rural loans in

en redimirlos de gravámenes anteriores, contribuye por una parte al progreso y desarrollo de la agricultura, y por la otra permite a los dueños de predios adquirir insensiblemente el pleno dominio de ellos».

41. GARLAND (1905: 51). The original text in Spanish is the following: «que otorgaba el comercio nacional y extranjero, entonces en apogeo, a los hacendados, lo mismo que los bancos de emisión y especialmente los hipotecarios, permitió a los propietarios de fundos rústicos convertir de golpe sus tierras en grandes haciendas de caña y dotarlas con valiosa maquinaria, y establecer en sus haciendas el número necesario de trabajadores chinos».

42. DANCUART (1905: vol. VII, 35). The original text in Spanish is as follows: «a la agricultura del país, que sufría también los rigores de la escasez de capitales y tenía que aceptar onerosas condiciones para conseguirlos».

43. CAMPRUBÍ (1957: 63, 65, 116). The original text in Spanish is as follows: «su favorable influencia surte efectos inmediatos, principalmente en la propiedad rústica, que casi duplicó su valor, y en la producción azucarera, estimulándola [...]. El Banco venía a satisfacer antes que todo, una necesidad imperiosa y largamente sentida por los onerosos gravámenes que soportaba la propiedad urbana y rústica y por sus precarias condiciones[...]. Su concurso no solo significó el progreso de la propiedad territorial y la efectiva iniciación del saneamiento de los muy onerosos gravámenes hipotecarios que pesaban sobre ella como consecuencia de la usura (hasta de 18%), sino una mayor actividad agrícola, que influyó en el incremento paulatino de las rentas aduaneras».

1865. In 1873 the amount was almost 150 thousand *soles*. Mortgage banks, however, made 1.56 million *soles* of new loans in 1873. In total, as a result of the creation of mortgage banks, mortgage credit experienced a significant growth in the late 1860s and early 1870s. By the mid-1870s, however, mortgage banks activity had declined substantially⁴⁴.

The evidence indicates that the loans granted by the two mortgage banks served to fund investment. Let us look, for example, at the specific purposes of loans made by the mortgage banks. According to the notarised contracts, mortgage banks made loans with three main purposes: pay old debts, purchase new land, and make «improvements» in the mortgaged estate. Table 5 classifies the loans according to their purpose. In 1866-70, around 10% of the loans were for purchasing estates; in 1871-75, 18% of the new loans had such purpose. Making improvements in the estate accounted for 36% of the number of loans in 1866-70 and 71% in 1871-75. In addition, around 55% of the new loans intended to repay old debts; such percentage declined to 11% in 1871-75.

Direct investment in the form of purchasing machinery, constructing or contracting coolies was facilitated by the two mortgage banks. Those forms of direct investment were labeled as «improvements». Some funded investment in the north of Peru. In February of 1872, for example, the *Banco de Crédito Hipotecario* loaned 30,000 *soles* to Francisco Morales, Antonio Morales and their wives Carmen and Rosa. The loan was secured with their *fundo* San Antonio in the valley Chicama, as well as with merchandise, production (sugar, rice and alfalfa), offices and machinery and its aim was to bring machinery from Europe and make other «improvements». In April of 1872, the same mortgage bank lent 18,000 *soles* to Juan Miguel Gálvez, secured with his *fundo* Catuden in the province of Contumasa in Cajamarca. The loan was used to build mills for sugar cane⁴⁵. Other loans funded investment in Lima. In March of 1870, the *Banco de Crédito Hipotecario* made a loan of 200,000 *soles* to Flores Hnos, Carranza y Cia to make «improvements» in several *fundos* of this company, such as San José Alto, San José Bajo, La Victoria, La

44. These figures are consistent with some estimates for the entire population of loans. Consider, for example, the case of Lima. According to ZEGARRA (2013a), the total estimated number of new loans granted by the two mortgage banks in Lima increased from only eight in 1869 to 66 in 1870 and 76 in 1873 and the value of new loans by mortgage banks increased from 42,000 *soles* in 1866 to 117,000 *soles* in 1869, more than half a million *soles* in 1871 and 1.63 million *soles* one year later. Outstanding loans increased from 681,000 *soles* in 1869 to near 1.5 million *soles* in 1871 and 3.7 million *soles* in 1873. The amount of credit granted by mortgage banks was important in comparison to that by private lenders: in 1873 outstanding credit by mortgage banks was twice as much as outstanding credit by private lenders. Mortgage banks provided an important volume of credit in Lima.

45. In January of 1871, the *Banco de Crédito Hipotecario* loaned 5,000 *soles* to Victoriano Seminario and his wife Jose Augusta, secured with their «Tierras de Capilla» in Ascope in the department of La Libertad and with all the capital goods in the *fundo*. The loan was used to build fences around the *fundo* and therefore clarify the property rights of the borrowers.

Grisalda, Cepeda and Pampas de Ventura⁴⁶. Others funded investment in the south of Peru. In May of 1872, the *Banco de Crédito Hipotecario* loaned 24,000 *soles* to Josefa Olazábal. The loan was secured with a *finca* of hers in the city of Arequipa and with her rural estates «*Tierras de Caragnen*» and «*Tierras del Arenal*» in the valley of Tambo. The loan was used to transform rural estates into sugar-cane *haciendas*⁴⁷.

Another form of investment in the agricultural sector was the purchase of estates. Some might argue that without funding for purchasing land, the estates would have remained in the hands of owners who may have not necessarily made the best use of those estates. By facilitating funds, mortgage banks would have allowed estates to be transferred into businessmen and *hacendados* who could make a better use of the land. Mortgage banks would have then facilitated a more efficient use of the resource land⁴⁸. However, one can make an alternative argument regarding the purchase of estates. The acquisition of land may have not necessarily led to an increase in efficiency if the objective was simply to accumulate political power in a country where wealth probably mattered for receiving privileges from the government.

One important feature of the banking sector is that the two mortgage banks did not lend funds to small farmers or aboriginal communities, probably due to deficiencies in land titles⁴⁹. An important number of proprietors may have faced enormous difficulties to access credit. This is an important point. Since mortgage banks mainly loaned to large landowners, they may have not fostered investment all over the country, but especially in coastal *haciendas*.

46. In January of 1871, Uladislao Rospigliosi obtained a loan from the Banco de Crédito Hipotecario for 20,000 *soles* to make investments in his fundo «Huerta de Guinea» in Lima. In March of 1872, Banco de Crédito Hipotecario made a loan to Enrique Canaval for 100,000 *soles* to make improvements in his *haciendas* Chilcal Grande, Chilcal Chico, San Juan de Huata, and Paramonga in the valley of Chancay.

47. In March of 1869, the Banco de Crédito Hipotecario made a loan of 8,000 *soles* to José Fernández Prada to «improve» his fundo in the valley of Chincha. In January of 1870 the Banco de Crédito Hipotecario loaned 10,000 *soles* to Pedro Ferreyra to make «improvements» in his fundo San Ignacio de Labora in Ica.

48. The two mortgage banks funded a large number of estate purchases. In April of 1870, for example, the Banco de Crédito Hipotecario loaned 800,000 *soles* to Mariano Laos and Seferino Elguera to purchase the fundos Caudivilla, Concón Alto, Concón Bajo, and Huacoy in the province of Carabaylo, and the *haciendas* Miraflores and Palpa in the valley of Chancay. In March of 1871, the Banco de Crédito Hipotecario made a loan of 24,000 *soles* to Ángel de las Casas to purchase half of the fundo «Moyopampa» to his brother. In April of 1872, the Banco Territorial Hipotecario loaned 4,000 *soles* to Fabián Carrillo to complete the price of the *hacienda* Tejada in the valley of Surco.

49. This is consistent with the findings for other Latin American economies. As BULMER-THOMAS (2003: 99) indicated: «such [mortgage] banks worked best in countries where title to land was clearly defined and with sufficient credit rating to offer mortgage bonds in foreign markets».

TABLE 5
Mortgage banks: purposes of loan

| | 1866-70 | | 1871-75 | |
|------------------------------------|-----------|--------|-----------|--------|
| | No. Loans | Amount | No. Loans | Amount |
| Distribution of loans (percentage) | | | | |
| Purchasing estates | 9.7 | 51.7 | 17.7 | 18.9 |
| Investing in the estate | 35.5 | 18.2 | 71.0 | 48.9 |
| Paying back old debts | 54.8 | 30.1 | 11.3 | 32.2 |

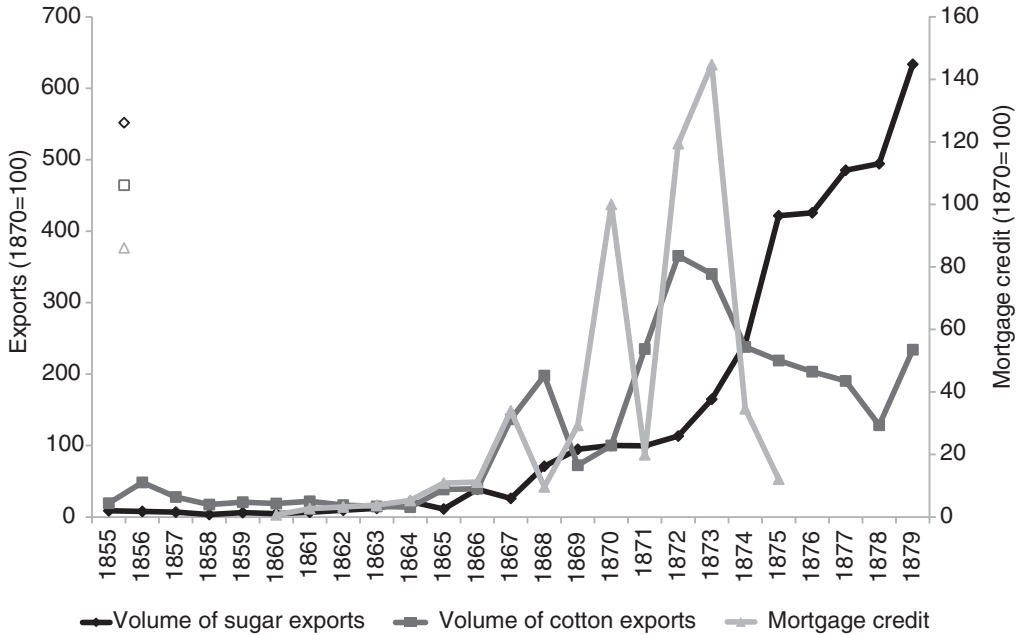
Note: this table classifies loans by the two mortgage banks according to the specified purpose of the loan. Source: National Archives of Peru. See section 2. Own elaboration.

The evidence indicates that most credit issued by the two mortgage banks was allocated to coastal landowners. This geographical concentration of loans is not surprising considering that the two main export crops, cotton and sugar, were cultivated on the coast. From colonial times, sugar was produced on the northern coast, especially in the departments of La Libertad and Lambayeque. Likewise, cotton was produced on the coast, in Piura, Lima, Ica and other coastal departments.

Since most lending by the two mortgage banks was concentrated on the coast, the increase in agricultural credit by those banks may have impacted the productive capacity of coastal agriculture. The statistical evidence suggests that the growth of rural credit by the two mortgage banks occurred at the time of significant growth of sugar and cotton exports. Figure 4 plots the volume of exports of sugar and cotton, as well as total mortgage credit by mortgage banks and private lenders. Since total credit by mortgage banks was much higher than total credit by private lenders, total mortgage credit was largely shaped by the evolution of mortgage banks.

The figure shows that both exports and credit increased in the late 1860s and early 1870s. According to estimates by Hunt (2012), prior to 1865 cotton and sugar exports did not have a clear upward trend. Cotton exports were 299 tons in 1855, 291 tons in 1860 and 596 tons in 1865. However, those exports then increased to 1,541 tons in 1870 and 5,633 tons in 1872. In the following years, cotton exports declined to 3,375 tons in 1875 and 1,980 tons in 1878. In spite of this decline, however, cotton exports in 1878 were much higher than in 1865. Meanwhile, sugar exports did not show a clear upward trend in 1850-65. Those exports were 1,149 tons in 1855, 618 tons in 1860 and 1,463 tons in 1865. From 1865, those exports showed a clear upward trend, increasing to 13,175 tons in 1870, 55,549 tons in 1875 and 65,137 tons in 1878.

FIGURE 4
Credit and agricultural exports



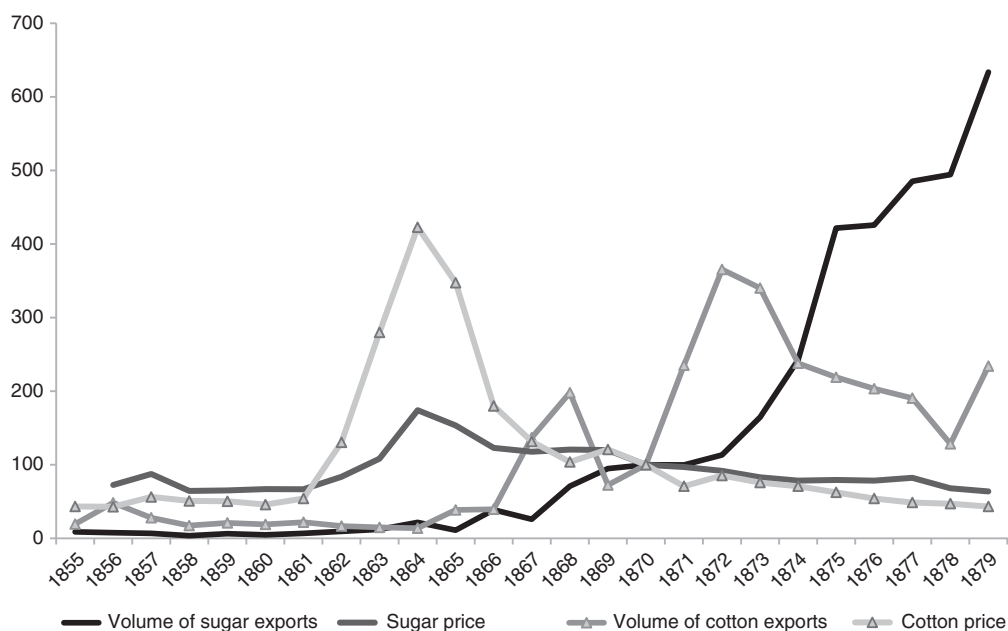
Source: National Archives of Peru. See section 2. Own elaboration.

It may be questioned that banking credit influenced the expansion of agricultural exports in Peru. Indeed, by the end of the 1870s, there does not seem to be a positive correlation between sugar and cotton exports and banking credit. After 1875, sugar and cotton exports expanded substantially in spite of the decline in banking operations. Although we cannot make a conclusive argument about a positive effect of banking on agricultural expansion, one must keep in mind that mortgage banks made loans to be paid in twenty years. The large amounts that the two banks loaned to landowners may have been useful to expand the productive capacity of their *haciendas* independently of what happened to the amount of new loans in the late 1870s.

In addition, it may be argued that during this period cotton and sugar prices experienced an important increase and that such increase in prices also encouraged investment in exporting agriculture. Figure 5 plots indexes of volume of exports and U.S. prices of sugar and cotton. The figure shows a clear increase in cotton prices in the early 1860s due to the U.S. Civil War (1861-65). Sugar prices also increased⁵⁰. Therefore, cotton and sugar prices increased substantially in the early 1860s but declined soon after the end of the war. This increase in exports prices, although temporary, may have encouraged

hacendados to invest in their *haciendas*. However, the response of sugar and cotton production to an increase in prices required investment and long-term credit. The volume of production of cotton and sugar increased and remained high, suggesting that *hacendados* invested large sums of money.

FIGURE 5
Exports and prices (1870=100)



Source: National Archives of Peru. See section 2. Own elaboration.

Since only two mortgage banks operated in Peru during this period, it is difficult that other crops benefited from the credit expansion. A similar situation occurred in other Latin American economies. Bulmer-Thomas (2003), for example, indicated that *the formal institutional framework tended to reinforce the tendency of the export-led model to concentrate on a limited number of commodities and discouraged diversification inside and outside the export sector*⁵¹. However, it is also possible that other crops were just not profitable

50. The wholesale price of cotton raw was 10.4 cents per pound in 1855 and 11 cents in 1860. During the Civil War, it increased reaching 1.01 dollars in 1864. The price then declined to 25 cents in 1867, 24 cents in 1870 and 15 cents in 1875. The wholesale price of sugar was 9.8 cents per pound in 1856 and 9 cents in 1860. It then increased to 21 cents in 1865 but then declined to 13.5 cents in 1870 and 10.7 cents in 1875.

51. BULMER-THOMAS (2003: 100).

enough as to invest large sums of money on them, especially considering the risk of investing in an emerging economy as Peru⁵².

The evidence shows that investment in sugar and cotton increased substantially in the late 1860s and 1870s. It is possible that mortgage banks played an important role in the expansion of the exporting agricultural sector during this period. If mortgage banks offered better loan conditions to landowners than what was available at that time, those landowners may have found it profitable to engage in long-term investment. The growth of the agricultural sector in the late 1860s and early 1870s may then have partly obeyed to the creation of mortgage banks.

The evidence, however, is far from conclusive. Although banks may have facilitated loans in better conditions to a number of large landowners, the evidence indicates that the number of beneficiaries was not very large. Indian communities, for example, were not beneficiaries of banking credit. Moreover, the active life of the two mortgage banks was too short as to have a lasting impact on the agricultural sector.

7. CONCLUSIONS

Notarial records indicate that landowners were able to obtain mortgage credit prior to the creation of mortgage banks. Loans were granted by private lenders under a variety of conditions. However, the creation of mortgage banks had an important impact on the mortgage credit market of Peru. First of all, mortgage banks offered loans with better conditions than private lenders. In particular, the maturity levels were much longer. Mortgage banks made loans for twenty years, whereas private lenders usually made loans for less than two years. In addition, the sums lent by the two mortgage banks were much higher than those by private lenders. In 1860-75, around 65% of loans by mortgage banks, for example, were for more than 10,000 *soles*, whereas only 22% of the loans by private lenders were in that category. Therefore, with the creation of mortgage banks, long-term investment in large investment projects was more feasible.

In addition, the volume of credit granted by the mortgage banks was much higher than the credit issued by private lenders in the early 1870s. By 1873, for example, total mortgage credit by mortgage banks was ten times as much as mortgage credit by private lenders. Therefore, with the creation of mortgage banks, total mortgage credit increased substantially between 1868 and 1873. However, the boom of banking was short-lived.

52. This is indeed a topic that requires further research.

From the mid-1870s, banking activity declined substantially. The decline in total exports and the financial problems of the banks of issue impacted the economy, in particular the mortgage banks. Mortgage banks were indeed more affected by the economic crisis than private lenders.

Mortgage banks facilitated credit to a number of large landowners. Most mortgage loans by the two mortgage banks was intended to make «improvements» in the estates or to purchase farms. The main beneficiaries of mortgage banking credit were large landowners in coastal areas, in particular cotton and sugar growers.

The statistical evidence suggests that the creation of mortgage banks occurred at a time of substantial growth of sugar and cotton production. It may be argued that banking fostered exporting agriculture. The evidence, however, is far from conclusive. First, export prices, and not only abundance of credit, may have fostered investment in the agricultural sector. Second, the boom of banking only lasted a few years.

ACKNOWLEDGEMENTS

The author thanks the assistance of the staff of the National Archives of Peru in the process of data collection, as well as the comments made by the anonymous referees of *Historia Agraria*.

REFERENCES

- BANCO DE CRÉDITO HIPOTECARIO (1869): *Segunda Memoria del Banco de Crédito Hipotecario presentada el 11 de febrero de 1869*, Lima: Imp. y Lit. de E. Prugue.
- BENSTON, G. and SMITH, C. W. (1976): «A transaction cost approach to the theory of financial intermediation», *Journal of Finance*, 31, pp. 215-231.
- BEVERIDGE, A. (1985): «Local Lending Practice: Borrowers in a Small Northeastern Industrial City, 1832-1915», *Journal of Economic History*, 45 (2), pp. 393-403.
- BONILLA, H. (1974): *Guano y Burguesía en el Perú*, Lima, Instituto de Estudios Peruanos.
- BRYANT, J. (1980): «A model of reserves, bank runs and deposit insurance», *Journal of Banking and Finance*, 43, pp. 749-761.
- BULMER-THOMAS, V. (2003): *The Economic History of Latin America since Independence*, Cambridge, Cambridge University Press.
- CAMPRUBÍ, C. (1957): *Historia de los Bancos en el Perú: 1860-1879*, Lima, Lumen.

- DANCUART, P. E. (1905): *Anales de la Hacienda Pública*, Vol. VII, Lima, Ministerio de Hacienda.
- DEMIRGÜC-KUNT, A. and MAKSIMOVIC, V. (1998): «Law, Finance and Firm Growth», *Journal of Finance*, 53 (6), pp. 2,107-2,137.
- DIAMOND, D. (1984): «Financial Intermediation and Delegated Monitoring», *Review of Economic Studies*, 51, pp. 393-414.
- DIAMOND, D. and DYBVIK, P. (1983): «Bank runs, deposit insurance and liquidity», *Journal of Political Economy*, 91, pp. 401-419.
- ENGELSEN, J. (1978): «Social Aspects of Agricultural Expansion in Coastal Peru», PhD Dissertation, Los Angeles, UCLA.
- GARCÍA-CALDERÓN, F. (1868): *Estudios sobre el Banco de Crédito Hipotecario y las Leyes de Hipotecas*, Lima, Imprenta dirigida por José M. Noriega.
- GARLAND, A. (1905): *Reseña Industrial del Perú*, Lima, Imprenta La Industria.
- GOOTENBERG, P. (1990): «Carneros y Chuño: Price Levels in Nineteenth-Century Peru», *Hispanic American Historical Review*, 70 (1), pp. 1-56.
- HANLEY, A. (2005): *Native Capital. Financial Institutions and Economic Development in Sao Paulo, Brazil, 1850-1920*, Stanford, Stanford University Press.
- HOFFMAN, P., POSTEL-VINAY, G. and ROSENTHAL, J.-L. (1992): *Priceless Markets: The Political Economy of Paris*, Chicago: University of Chicago Press.
- HUNT, S. (2012): *La formación de la economía peruana*, Lima, BCRP, IEP.
- LA PORTA, R.; LOPEZ-DE-SILANES, F.; SHLEIFER, A. and VISHNY, R. (1997): «Legal Determinants of External Finance», *Journal of Finance*, 52 (3), pp. 1,131-1,150.
- LA PORTA, R.; LOPEZ-DE-SILANES, F.; SHLEIFER, A. and VISHNY, R. (1998): «Law and Finance», *Journal of Political Economy*, 106 (6), pp. 1,113-1,155.
- LA PORTA, R.; LOPEZ-DE-SILANES, F.; SHLEIFER, A. and VISHNY, R. (2000): «Investor Protection and Corporate Governance», *Journal of Financial Economics*, 58 (1-2), pp. 3-28.
- LELAND, H. E. and PYLE, D. H. (1977): «Informational asymmetries, financial structure and financial intermediation», *The Journal of Finance*, 32, pp. 371-387.
- LEVY, J. (2012): *The Making of a Market. Credit, Henequen and Notaries in Yucatan, 1850-1900*, Pennsylvania, The Pennsylvania State University Press.
- PIEL, J. (1970): «The Place of the Peasantry in the National Life of Peru in the Nineteenth Century», *Past and Present*, 46, pp. 108-133.
- PIKE, F. (1976): *The Modern History of Peru*, London: Cox & Wyman Ltd.
- QUINN, S. (2001): «The Glorious Revolution s Effect on English Private Finance: A Microhistory, 1680-1705», *Journal of Economic History*, 61 (3), pp. 593-615.
- RAGUZZI, P. (2002): «The Legal System, Institutional Change, and Financial Regulation in Mexico, 1870-1910: Mortgage Contracts and Long-Term Credit», in BORTZ, J. and HABER, S. (eds.), *The Mexican Economy, 1870-1930. Essays on The Economic History*

- of Institutions, Revolution and Growth*, Stanford, Stanford University Press, pp. 120-158.
- REDISH, A. (2003): «The Mortgage Market in Upper Canada: Window on a Pioneer Economy», in ENGERMAN, S.; HOFFMAN, P.; ROSENTHAL, J.-L. and SOKOLOFF, K. (eds.), *Finance, Intermediaries, and Economic Development*, Cambridge, Cambridge University Press, pp. 111-131.
- U.S. DEPARTMENT OF COMMERCE (1978): *Historical Statistics of the United States, Colonial Times to 1970*, Washington D.C., U.S. Government Printing Office.
- YEPES, E. (1971): *Perú 1820 1920. ¿Un siglo de desarrollo capitalista?*, Lima, Ediciones Signo.
- ZEGARRA, L. F. (2013a): «Banks, Private Lenders and Mortgage Credit in Peru», Working Paper, Lima, CENTRUM Católica.
- ZEGARRA, L. F. (2013b): «Political instability, Institutions and Mortgage Credit in Peru, 1830-65», Working Paper, Lima, CENTRUM Católica.
- ZEGARRA, L. F. (2014): «Women and Credit in Peru during the Guano Era. Was There Gender Discrimination in the Mortgage Credit Market of Peru?», *Journal of Iberian and Latin American Economic History*, 32 (1), pp. 151-185.

