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The rentier behavior of the Brazilian banks

O comportamento rentista dos bancos brasileiros

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RESUMO: O Brasil é um caso emblemático de financeirização no qual uma alta taxa de juros Selic beneficiou as instituições financeiras. No entanto, a taxa Selic real caiu historicamente, tornando-se negativa em 2020. Com isso, seria possível presumir que o rendimento dos bancos fosse negativamente afetado, o que não ocorreu. Os bancos superaram esse desafio macroeconômico aumentando as operações de crédito. Nesse contexto, nosso estudo confirma que o aumento da receita do *spread* de crédito está inversamente correlacionado à queda da taxa Selic. Portanto, concluímos que os bancos mantiveram um comportamento rentista: os ganhos obtidos com títulos públicos derivados da alta taxa Selic foram substituídos por um elevado *spread* cobrado dos consumidores de crédito.
PALAVRAS-CHAVE: Financialização; *spread*; bancos; taxa de juros; *markup*.

ABSTRACT: Brazil is an emblematic financialization case in which a high Selic interest rate benefited financial institutions. However, the real Selic rate has historically declined, becoming negative in 2020. As a result, one should expect banks' incomes to be negatively affected, yet this was not the case. Banks overcame this macroeconomic challenge by increasing credit operations. Within this context, our study confirms that the increasing credit spread income is inversely correlated to the declining Selic rate. Hence, we conclude that banks have maintained a rentier behavior: security gains derived from the past high Selic rate phase were replaced by a high spread charged to credit consumers.
KEYWORDS: Financialization; spread; banks; interest rate; markup.
JEL Classification: G00; E42; E43; E44; B50.

INTRODUCTION

Our study proposes a distinctive approach to understanding the rentier behavior of the Brazilian banking sector. We promote a bank-based analysis: study the sector by gathering income statement data from a representative sample from 2000 to 2020. The main goal of this research is to determine how banks adapted their

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rentier behavior when the Selic rate[1] declined and gains shifted from public bonds to credit operations. With this objective in mind, we analyze the variables security and credit incomes (the two primary incomes of the sector) and the here-dubbed spread income, which is the difference between credit income and the cost of funding. The spread income is the crucial variable for the rentier analysis, as it denotes the gross amount effectively retained by the sector in the form of interest.

More specifically, we answer three research questions:

1. First, are credit operations becoming more relevant for the banking sector profitability? The question aims to see if our bank-based analysis confirms the increasing relevance of credit in Brazil. We hypothesize that credit income should increase more than security income during a declining Selic rate context.
2. Second, are security and credit incomes determined by the Selic rate? The objective is to verify if the Selic rate is an essential determinant of security and credit incomes. We hypothesize that the ratio between the variables is correlated to the Selic rate: a low Selic rate should increase credit income relative to security income.
3. Third, have banks replaced markups from the bond to the credit market in times of Selic rate decline? To verify if banks displaced markups, we match the spread income variable with the declining Selic rate. We hypothesize that both variables are inversely correlated, hence, that the spread income increased to compensate for the security income losses.

The article is structured as follows. The first five sections offer a review of the literature. Section 1 contextualizes the reader on the financialization phases in Brazil. Section 2 elaborates on the rentier-financial class coalition framework, as conceptualized by Bresser (2018) and Bresser et al. (2020), which argues that five rentier channels operate in the bond market, guaranteeing high security gains. Section 3, in turn, exposes the challenges of the framework, which is related to the recent expansionary monetary policy context.

Moreover, since the inflation target regime, adopted in 1999, the long-run declining Selic rate tendency has decreased the relative importance of public bonds while increasing the relevance of credit for the banking sector's profitability. In examining this new context, section 4 reviews the Brazilian credit market, sharing the two most relevant explanations for the expensive credit costs, as available in the literature. Lastly, section 5 ends our literature review by commenting on the implications of financialization for the Brazilian economy.

In the sequence, section 6 presents our empirical study, answering our three research questions. The third research question deserves particular attention, as it aims to update the rentier-financial class coalition framework for the latter low

[1] The Selic interest rate is the federal funds rate, the key tool used by the Central Bank of Brazil in implementing the monetary policy.

Selic rate and credit expansion phase. Moreover, if our hypothesis is supported, and an increasing spread income compensates for security income losses when the Selic rate declines, this would demonstrate that, beyond the five rentier channels operating on the bond market, there is a sixth rentier channel on the credit market. Finally, section 7 discusses the results, and section 8 concludes the research.

To briefly anticipate our main findings and conclusions: the three hypotheses were confirmed. Credit income expanded more than security income. Concerning the second research question, a significant correlation between the ratio of security to credit incomes and the nominal Selic rate was found, allowing us to defend that the Selic rate is a relevant driver of the credit expansion process in Brazil. Finally, concerning the rentier theme tackled by the third research question, a robust relationship proves that a sixth channel operates in the credit market. Hence, we conclude that the rentier-financial class coalition continues to be a relevant framework for understanding the financial institutions during the latter low Selic rate phase.

1. THE FINANCIALIZATION PHASES IN BRAZIL

In Brazil, the first financialization phase goes from 1969 to 1994, while the second covers the period from 1995 to 2015 (Bruno and Caffé, 2015). The main characteristic of the first phase was inertial inflation, sparked by the fiscal and external-debt crises of the 1980s (Lavinas et al., 2021). During this period, profits were backed up by a financial-indexed currency, which was managed and issued endogenously and protected the financial sector from inflationary risks (Bruno et al., 2011).

Moreover, institutions created mechanisms for the monetary correction of prices and salaries to compensate for past inflation, fueling its steep rise. Bruno et al. (2011) named the first phase a "dual monetary-financial and inflationary regime". The word duality refers to the existence of two currencies: (i) the official currency issued by the state, which functions as a unit of account and means of payment, and (ii) the financial-indexed currency, which functions as a store of value, as an instrument for private enrichment. According to the authors, the latter currency was based on assets of high liquidity and low-risk profitability.

The second financialization phase began when the financialization rate and fixed capital accumulation rate diverged (Bruno and Caffé, 2015). If before the rates were correlated and savings were generally allocated to production, from 1994 onward, the financialization rate grew substantially and disconnected from the accumulation rate, which stagnated. According to the authors, "at this point, institutional changes began to offer channels in which capitals could find a wide range of highly profitable and liquid financial assets that a financialized economy usually offers (…)" (Idem, p. 51).

Another relevant aspect of the second phase was that past inflationary gains were replaced by interest income (Bruno et al., 2011, p. 740). Moreover, during this period, financial profits were derived from an atypical monetary policy: in 1994,

Brazil established a pro-conservative monetary policy convention, and a very high-interest rate (far beyond the international standard, including developing countries) was set to compensate holders of government bonds. For Bresser et al. (2020), the second phase is characterized by a rentier-financial class coalition manipulating the issuance of bonds and monetary policies according to a rentier logic.

2. THE RENTIER-FINANCIAL CLASS COALITION

Influenced by Gramsci and the dominant political bloc paradigm, Lara Resende (2017), Bresser (2018), and Bresser et al. (2020) argue that the Brazilian financial system exposes a rentier behavior. For the latter of these authors, high interest rates and exorbitant financial profits in the second phase are due to a rentier-financial class coalition promoting a political compromise around a high Selic rate. The framework defends a regulatory capture idea, according to which institutions are dominated by the interest they regulate.

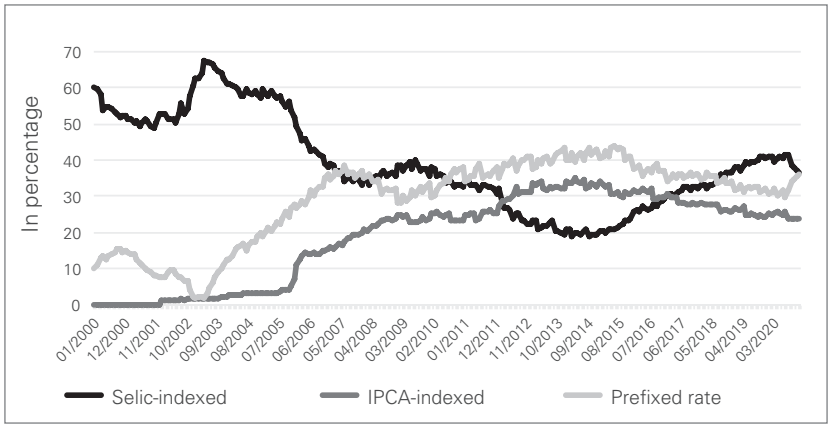
The coalition operates through five channels, of which we present three[2]: the first influences the issue of bonds, the second affects the monetary policies, and the third increases the bargaining power of rentiers. It is important to stress that the channels are part of a particular bond market, in which a high number of securities are indexed rather than prefixed. For Paula and Pires (2017), high amounts of indexed bonds are a legacy of the period of high inflation, which continues to safeguard agents from income losses.

The first channel refers to the relationship between the financial market and the National Treasury when during the negotiations of public bonds, the market pressures the Treasury to issue bonds that provide hedges according to different macroeconomic scenarios. Figure 1 offers better visualization of the argument, exposing the three most essential securities issued by the Treasury: Selic-indexed, IPCA-indexed (indexed to the National Extended Consumer Price Index), and Prefix rate.

As shown, in periods of greater macroeconomic stability, such as 2004-2014, the share of Prefixed rate securities grows. However, in times of greater stress, the state issues more Selic-indexed bonds, also known as the "paper of crisis." Additionally, in the 2011-2015 period, marked by inflationary acceleration, the issuance of IPCA-indexed securities increased. For Bresser-Pereira et al. (2020), data indicate that holders of federal public debt are pressuring the National Treasury to issue public bonds under conditions that favor them, providing a hedge for interest rate or inflation risk, depending on the economic scenario.

[2] The two channels not treated in this article are related to the exchange rate and can be read in Bresser et al. (2020).

Figure 1: The three main security bonds issued

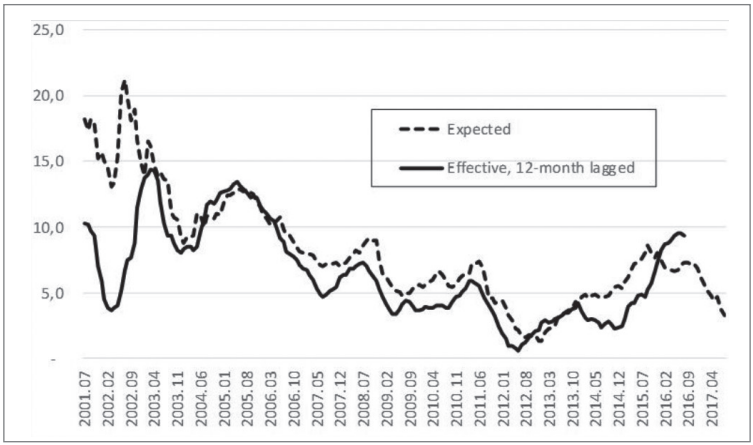


Source: Own elaboration. Brazilian Central Bank Time Series.

The second channel is related to the Focus Report, disclosed by the Central Bank of Brazil, which assembles the forecasts of the financial market on various economic indicators, including inflation and interest rates. For the authors, there is a tendency for the market to bias their expectations on interest and inflation rates upwards, seeking to pressure the Brazilian Central Bank (BCB) to sanction its expectations.

Figure 2 demonstrates how the second channel works by comparing the expected and effective (12-month lagged) Selic. As shown, "(i) the expected rate is a good indicator of the effective rate's direction, which may be regarded as a good predictor of the interest rate to be set by the BCB; (ii) however, generally speaking, the expected rate is higher than the effective one, which seems to suggest that the market tends to overshoot its interest estimates in the Focus Report in hopes that the BCB will endorse its expectations" (Bresser et al., 2020, p. 14).

Figure 2: Expected (Focus) and effective Selic rates (% p.a.)



Source: Barbosa (2017), from BCB, IPEADATA and BM&Bovespa data.

The third channel, primarily recognized by Barbosa (2006), is related to the first, hence, to the ability of the market to pressure the National Treasury. According to Barbosa, there is a contagion effect between monetary policy and public debt in Brazil. The contagion occurs because the Central Bank indexes public debt to the interest rate, making public debt and bank reserves perfect substitutes. The implications are the following: the interbank market rate tends to incorporate the Brazilian public debt risk premium, and investors can access liquid and indexed investments in both the reserves market (repos) and the securities market (LFT).

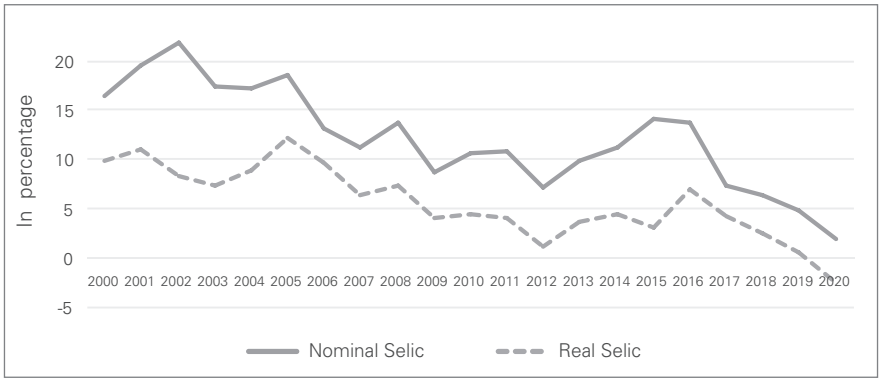
According to Bresser et al. (2020), the contagion effect is a two-way street. The bond market influences the reserve market by increasing the cost of the public debt rollover; the bank reserves influence the public bond market due to the conservative behavior of the Central Bank's monetary policy. This reality causes upward pressure on the interest rate, raising the public debt issuing and rollover financial costs. The third channel is related to the first, once the contagion effect allows the financial market to arbitrage its investments in securities with different indexers and according to its convenience. In other words, the contagion offers institutional strength to investors by allowing them to pressure the National Treasury to provide returns on securities under favorable conditions.

3. THE CHALLENGE OF THE RENTIER-FINANCIAL CLASS COALITION FRAMEWORK

The challenge faced by this framework lies in the fact that the Selic prime rate has recently declined to record-breaking lows, compromising the core explanation of a rentier-financial class coalition around a high Selic rate at the helm of the Brazilian State (Lavinas et al., 2021). Moreover, as seen in Figure 3, the real Selic rate fell, becoming negative (-2.5%) in 2020. According to Lavinas, during the latter years, "Selic-driven financialization has been substituted by other forces, such as credit and investments in shares" (Idem p. 2).

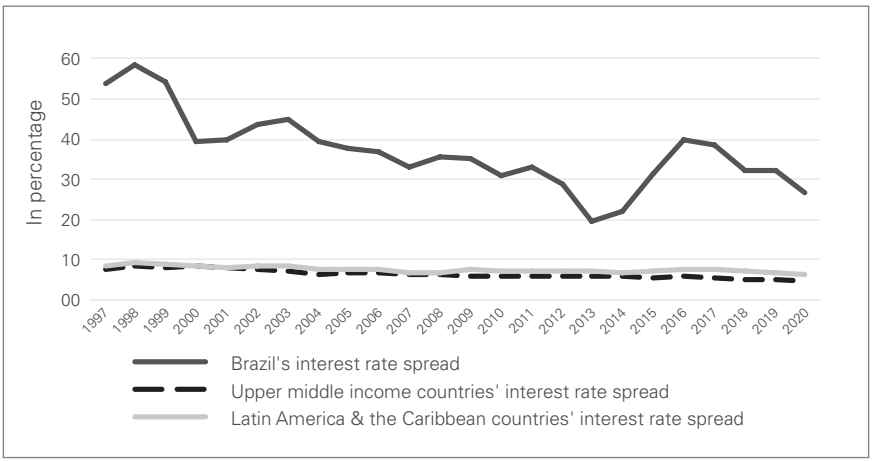
The low Selic rate context brings the credit expansion process to the center of the banking profitability debate. From a rentier approach, it raises questions about the spread: are credit markups also high? Once again, Brazil is here an intriguing exception: the country has the highest credit costs in the world (Zeidan, 2020). In this line, Figure 4 shows that the interest rate spread in Brazil is way above average, which allows us to speculate if the rentier-financial class coalition is also promoting a political compromise around a high spread. In this regard, the following section will summarize the two main interpretations available in the literature concerning the high banking spread in Brazil.

Figure 3: The Selic interest rate



Source: Own elaboration. IBGE, National Accounts Time Series, and Brazilian Central Bank.

Figure 4: Interest rate spread (lending rate minus deposit rate)



Source: Own elaboration. The World Bank.

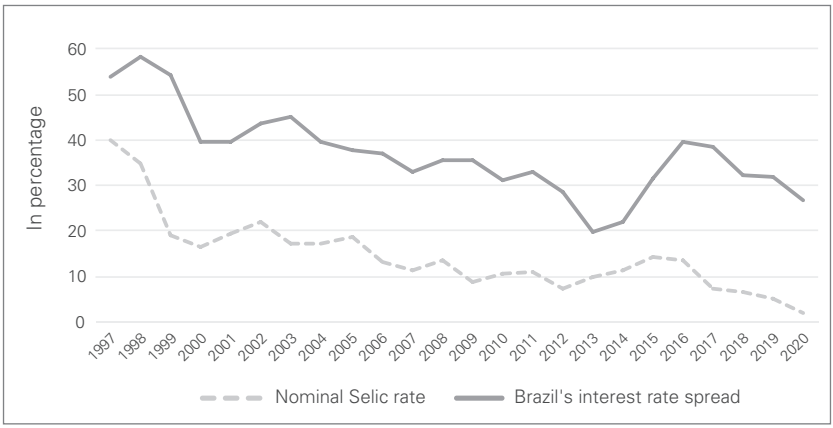
4. WHY IS THE CREDIT SPREAD HIGH?

The positive correlation between the Selic rate and the spread rate lends credence to the post-Keynesian opportunity cost argument, according to which a high spread is also a macroeconomic implication of the high Selic rate: banks have taken fewer risks from credit operations and practiced high credit spread due to the possibility of obtaining good yields, liquidity, and security by holding government bonds (Oreiro et al., 2006; Oliveira and Carvalho, 2007; Da Silva et al., 2007).

Although relevant, the opportunity cost explanation fails to explain the recent

years, when the Selic rate declined while the spread rate continued at high levels. This fact can be noticed in Figure 5 by the increasing distance between the Selic rate and the Brazilian spread in the post-2015 period. If, on the one hand, data shows that the spread rate fluctuates according to the Selic rate, on the other hand, the banking spread continued to be relatively high despite the real Selic rate becoming negative in 2020. In this line, challenging the typical opportunity cost argument, Martin et al. (2021) showed that the Credit Cost Indicator (ICC) did not follow the declining Selic rate from 2015 until 2020.

Figure 5: Brazil's interest rate spread (lending rate minus deposit rate) and the nominal Selic rate



Source: Own elaboration. The World Bank. IBGE, National Accounts Time Series, and Brazilian Central Bank Time Series.

A second common explanation argues that it is a problem of market concentration. The Herfindahl–Hirschman Index (HHI) shows that spreads are higher in concentrated banking systems. In this regard, Bignotto and Rodrigues (2006), Dantas, Medeiros and Capelletto (2011), Divino and Almeida (2013), and Fiche (2015) found a positive correlation between the degree of market concentration and the spread rate in Brazil. In a recent study, Zeidan stresses the importance of the theme. According to his findings, "The five-bank asset concentration has increased from 50% in 1997 to 85% in 2019" (Zeidan, 2020, p. 5).

The increasing market concentration leads economists to suggest that the lack of competition is the main problem. The logic asserts that the existence of more institutions means more competition, which should lower markups. This argument, however, also exposes a limitation, which rests on the fact that Brazil is not an exception in competition indexes as it is in the spread indexes. As shown by Sena (2019), several other countries expose similar or worse levels of competition while having cheaper costs of credit.

5. THE IMPLICATIONS OF FINANCIALIZATION

This section summarizes the consequences of the above-reviewed financialization process for the Brazilian economy. The first implication is deindustrialization. In this line, research published by Paulani (2010), Bruno (2011), and Bruno et al. (2011) conclude that financialization exacerbates capital owners' preference for liquidity, keeping capital from remaining in the productive sector. The authors stress that financialization exacerbates deindustrialization and is a structural impediment to economic growth.

The Institute for Industrial Development Studies (IEDI) calls attention to the subject by sharing a study with the following results: from 1971 until 2017, Brazil reduced the weight of its industries' contribution to GDP by almost half, falling from 21,4% to 12,6%. According to the authors, "Brazil represents one of the world's most serious premature industrial cases" (IEDI, 2019, para. 3). In the national debate, the theme of deindustrialization is generally studied by the New Developmentalist, according to Oreiro and Feijó (2010), Loures, Oreiro, and Passos (2006), and Bresser-Pereira and Marconi (2009), deindustrialization is a result of a problematic combination of financial openness, appreciation of the terms of trade, and appreciation of the exchange rate.

A second relevant macroeconomic consequence of the high Selic prime rate was an increasing internal public debt. As shown by Bruno et al. (2011), both variables: the internal debt stock and the accumulated factor of the real Selic rate, have a clear correlation between 1991 and 2009. Additionally, the Granger causality test confirmed the unilateral correlation: changes in the Selic interest rate precede changes in the public debt (Bruno and Caffé, 2015, p. 1043). In line with the above findings, Bresser et al. (2020) conclude that the capitalized real Selic rate expanded the domestic public debt endogenously from 1990 to 2018.

A third consequence was the capture of social policies by the financial sector (Lavinas, 2017), which began to provide services that were previously obligations of the state as the guarantor of fundamental rights. According to Lavinas et al. (2019), from 2013 to 2016, the Brazilian state began to delegate to the financial sector the provision of benefits related to social security. The goal of the financial sector is to increase margins by accessing and managing pensions, the health system, and the education system, turning them into "collaterals" (Lavinas, 2018). For the population, the main consequence is the transformation of social rights into commodities. Once commodified, only those who can afford the high costs can access the services.

Finally, the last consequence is related to the high cost of credit. On the supply side, expensive credit increases the cost of production since the high financial costs are passed on by companies in the production chain, from suppliers to the final sellers. On the consumption side, it reduces aggregate demand and causes families to enter a terrible cycle of indebtedness, sometimes needing to use credit to pay off debts instead of consuming goods and services (Lavinas, 2018). Expensive credit

thus takes a toll on the entire economy: it inflates costs for entrepreneurs and consumers, transferring part of their income to the rentier and unproductive class.

6. THE CASE STUDY

6.1 General objectives and expectations

Our study speculates that banks maintained a rentier behavior during the declining Selic rate period. The core hypothesis is that an increasing credit spread income compensates for the security income losses. Moreover, we conjecture about the existence of a sixth channel through which the rentier-financial class coalition operates rentier gains. Unlike the fifth formers, which are channels related to the bond market, the sixth channel operates through the credit market, maintaining the rentier income high when the Selic rate declines.

Table 1 summarizes the core tendencies we expect empirical data to back up for the period analyzed.

Table 1: Expected tendencies from 2000 to 2020

In the year 2000	In the year 2020
High Selic rate	Low Selic rate
Lower credit income in comparison to security income	Higher credit income in comparison to security income
High spread rate	Lower spread rate
Low spread income	High spread income

Concerning the two latter trends, a declining spread rate (at least until 2015) and an increasing spread income: this could appear, at first sight, contradictory. How could data expose an increasing spread income concomitantly to a decreasing spread rate? However, this is explained within the context of increasing credit operations, which characterizes the second financialization phase: although the spread rate decreased, spread income increased due to the increasing amount of credit operations.

6.2 Explaining the variables

According to Martin et al. (2021), security income is composed of the income related to repo operations and assets that have their profitability associated with the Selic rate, while the credit income variable comprises all types of incomes originated by credit operations. Concerning the credit operation, Souza (2007) states that it consists, on the one hand, in raising funds from surplus agents and remunerating them back, on the other hand, in investing a portion of these funds by lending it to deficit agents. The difference between the rate charged to borrow-

ers and the funding costs rate is known as a spread rate, which comprises the expenses related to operating as the financial intermediator, such as administrative expenses, taxes, fees, and risks, and the banks' profit.

Hence, the spread encompasses a reality of conflicting interests: the objective of funders is to accomplish the highest returns, while the banks' goal is to decrease their costs of funding and increase profits. In this line, data exposed by Bruno (2008) shows that from 1995 to 2005, interest flows received and paid by the Brazilian banking-financial system were about 29.4% and 22.2% of the GDP, respectively. This means that capital owners such as families and non-financial companies received about 22.2% of the Brazilian GDP in the form of interest income, while the difference of 7.1% corresponds to the portion effectively retained by the banking-financial system.

6.3 The accounting definition

The official accounting definition is available online in the Financial System Norms Manual at the Accounting National Financial System Institutions (COSIF), part of the Central Bank of Brazil. According to the manual, the Security Income account (3092200-0) incorporates all incomes related to securities, and, as seen in Section 2, the three most relevant bonds issued by the National Treasury are the Selic-indexed, IPCA-indexed, and prefixed rate bonds.

The Credit Operations account (7110000-1) incorporates the income from refinancing leases, advances to suppliers, several types of loans, and financing (export, rural, agro-industrial real estate, housing, infrastructure, and development). At last, the Funding Cost account (8110000-8) incorporates the following expenses: savings deposits, liabilities for foreign securities, inter-financial deposits, time deposits, judicial deposits, Time of Service Guarantee Fund (FGTS) deposits, repo operations deposits, various bills (mortgage, real estate, financial, etc.), and debentures.

6.4 Methodologies for the spread analysis

There are two approaches for analyzing the spread, which change according to the methodological source: ex-post and ex-ante. According to Fiche (2015), the ex-ante spread is measured, as the name suggests, from the expectations of the financial institutions, based on contractual values measured at the moment the credit is conceded, thus, before the effective result. In contrast, the ex-post spread is calculated from accounting data and offers the effective result obtained in the period.

For Almeida and Divini (2013), studies in Brazil have emphasized an ex-ante approach, bringing about a shortage of ex-post research, which needs to be addressed. The emphasis on ex-ante methodologies, according to the authors, is due to three reasons. First, annual reports are fundamentally ex-ante; second, historical time series available by the national financial system are also calculated ex-ante; third, it is more difficult to aggregate data and collect analytical material from an ex-post methodology.

Concerning the ex-post spread, there are several methods for measuring it. The most relevant ones in the international debate were presented by Ho and Saunders (1981) and Angbazo (1997). In Brazil, a study carried out by the Institute for Accounting, Actuarial and Financial Research Foundation (FIPECAFI) in 2004 defined three types of spreads:

- The Gross Spread, defined as the difference between credit income and cost of funding;
- The Direct Spread, which subtracts from the former: taxes, provisions for doubtful accounts, and other types of expenses directly related to the product;
- The Net Spread, outlined as the Direct Spread minus operating expenses (personnel expenses and other operating expenses), income tax, and social contribution.

For reaching a rate, FIPECAFI's article proposed two options. First, the Spread Rate, calculated as the ratio between the spread (gross, direct, and net) and the total volume of resources loaned. Second, the Spread Margin, calculated as the ratio between the spread (gross, direct, and net) and the variable total credit income.

6.5 The three characteristics that distinguish our study

In our research, what we refer to as spread is the Gross Spread, calculated as the difference between credit income and the cost of funding. However, the first important distinction between our ex-post study concerning past ones (Manhiça, 2009; Dantas, Medeiros and Capelletto, 2011; Divino and Almeida, 2013; Jorgensen and Apostolou, 2013; Fiche, 2015) is that we do not divide the spread by any variable. Hence, we do not study the rate but the evolution of the spread from a total income perspective: here named the spread income.

Second, we believe that twenty-eight years after the implementation of the Real Plan (1994) offers a unique opportunity for questioning long-run tendencies. In this regard, our research opted to cover an extended period, from 2000 to 2020.

Third, we combine Durand's (2017) fictitious capital framework with O'Sullivan's (2019) methodological critique. From the fictitious capital framework, we brought the insight of questioning if markups were replaced when gains shifted from public bonds to credit operations. From O'Sullivan's (2019) critique, we derive our bank-based approach. For O'Sullivan, a general focus on the nation as a unit of analysis has minimized the importance of studying variables from an enterprise stance, bringing the risk of skipping relevant understandings about how profits and revenues expose logical behaviors.

6.6 Sources

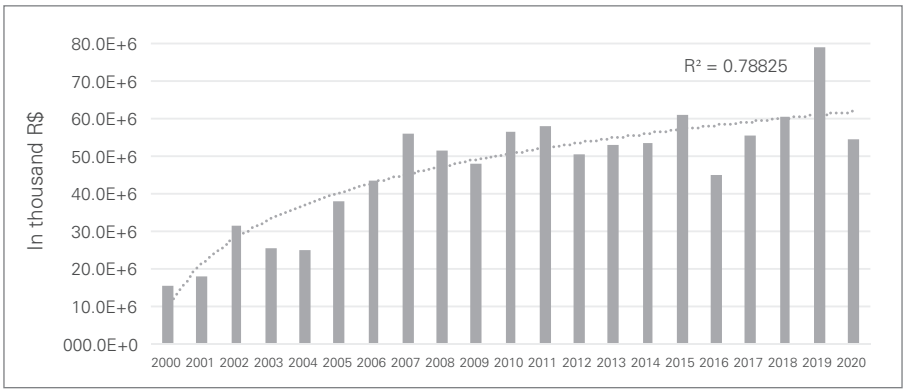
Accounting data from the financial sector is made available by the IF.Data

system, from the Central Bank of Brazil. The database[3] provides income statements and quarterly reports from all financial entities, from financial conglomerates to independent institutions. Similar to Martin et al. (2020), the so-called B1 business category was selected to represent the whole sector, which includes multiple banks (with commercial portfolios), commercial and savings banks. The B1 category represents approximately 70% to 85% of the total net income of the financial sector, depending on the year[4]. At last, the time series were deflated by the National Extended Consumer Price Index (IPCA).

6.7 Data and results

As seen in section one, a characteristic of the second financialization phase (from 1995 to 2015) is that profits are derived from a high Selic rate. Following the logic, a decline in the Selic rate should negatively affect the sector's profitability. As Figure 6 demonstrates, this was not the case. The variable real net income of the banking sector has increased during the last twenty years, detached from the declining Selic rate trend. Moreover, data shows a steep increase in net income from 2000 to 2008, followed by a more moderate growth from 2009 to 2020[5].

Figure 6: Real net income of the banking sector (B1 category)



Source: Own elaboration. IF.Data, Brazilian Central Bank.
Deflated by the IPCA consumer price (100 = 2000).

[3] Income statement data is available every quarter. The first and the third quarters of the IF.Data are quarterly results, while the second and fourth quarters accumulate the first and second half of the year. Data was gathered and adjusted to an annual basis by aggregating the second and fourth quarters.

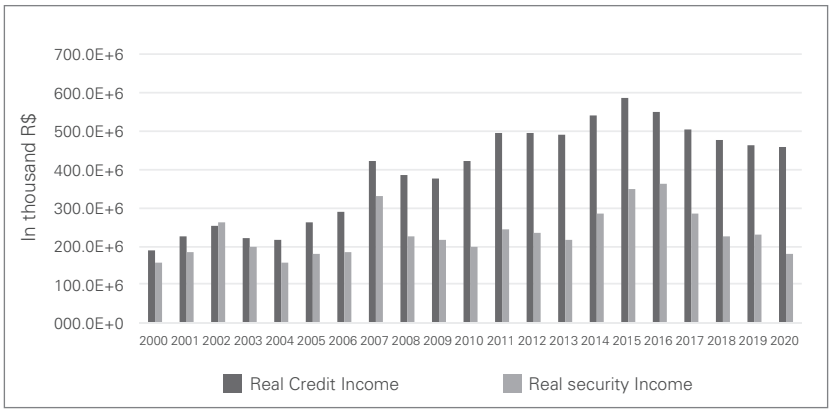
[4] The table below shows the relevance of the B1 category in comparison to all financial conglomerates and independent institutions in Brazil from a total net income perspective:

Selected years	2000	2005	2010	2015	2020
B1 participation in total net income	81%	83%	73%	84%	73%

[5] The deacceleration was confirmed by the R-squared value test, which had in the logarithmic trendline the highest R^2 result (R^2 = 0,79).

The first hypothesis to be tested is that credit income increased more than security income during the period analyzed. In this regard, the variables security and credit income were gathered and exposed in Figure 7. As shown, the hypothesis was confirmed, credit income rose substantially between 2000 and 2015, while security income exposes no increasing tendency in the long run. Worth noticing that from 2015 onward, the economic crisis affects the baking sector, and both income variables start to decline.

Figure 7: The banking sector's main incomes



Source: Own elaboration. IF.Data, Brazilian Central Bank.
Deflated by the IPCA consumer price (100 = 2000).

The second research question our study aims to answer is: to what extent are the two main incomes of the sector related to the shifts in the Selic rate? In other words, how strong is the relationship between credit and security income to a declining Selic rate? Our hypothesis asserts that the security and credit income ratio is correlated to the Selic rate. In the long run, the low Selic rate should incentivize banks to lend and increase the credit income relative to the security income. To confirm our hypothesis: first, we calculated the ratio of the two variables (security income was divided by credit income); second, we matched the ratio to the Selic rate. Table 2 exposes the ratio results.

Table 2: The ratio of security income to credit income from 2000 to 2020

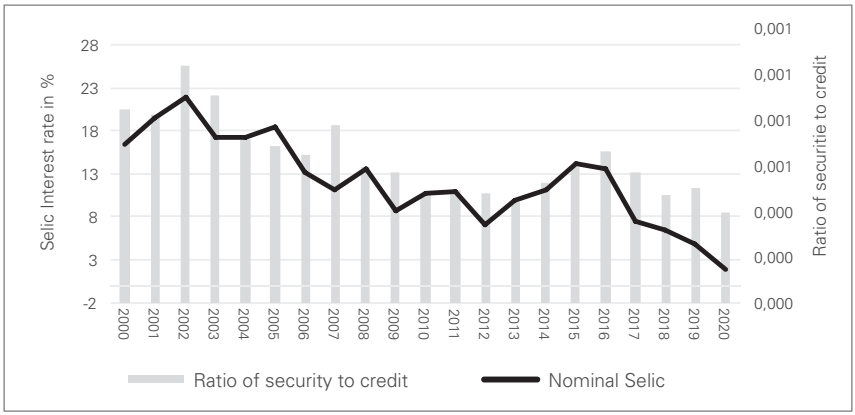
Year	The ratio of security to credit
2000	0.84
2001	0.82
2002	1.03
2003	0.90
2004	0.71
2005	0.68

2006	0.64
2007	0.78
2008	0.59
2009	0.57
2010	0.47
2011	0.49
2012	0.48
2013	0.44
2014	0.53
2015	0.59
2016	0.66
2017	0.57
2018	0.47
2019	0.50
2020	0.40

Source: Own elaboration.

In the sequence, Figure 8 matches the nominal Selic rate and the ratio of security to credit income, as presented in Table 2. As shown, the second hypothesis is also confirmed. The ratio of security to credit exposes a significant relationship with the declining nominal Selic rate.

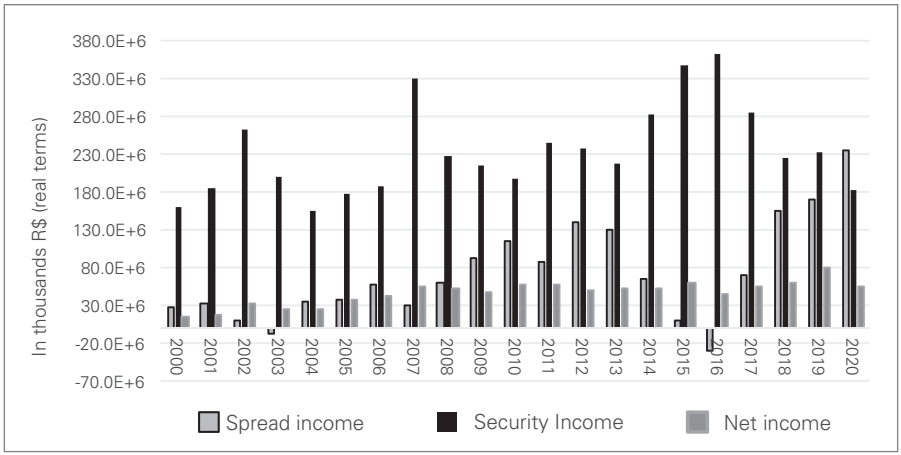
Figure 8: The relationship between the Selic rate and the banking sector's two main incomes



Source: Own elaboration. IF.Data, Brazilian Central Bank.
Deflated by the IPCA consumer price (100 = 2000).

To offer a better overview of the dynamism of revenues, Figure 9 plots the variables spread income (credit income minus cost of funding), security income, and net income. The figure allows us to grasp the increasing importance of the spread income for the banking sector's profitability through the period analyzed. As the figure indicates, spread income has increased, surpassing for the first time the security income in 2020. Moreover, spread income rose almost eight times during the period, going from around R$ 30 billion in 2000 to R$ 230 billion in 2020. Worth noticing that spread income and security income also seems to compensate each other in the short run. For instance, in 2016, while spread income became negative, security income reached its highest peak.

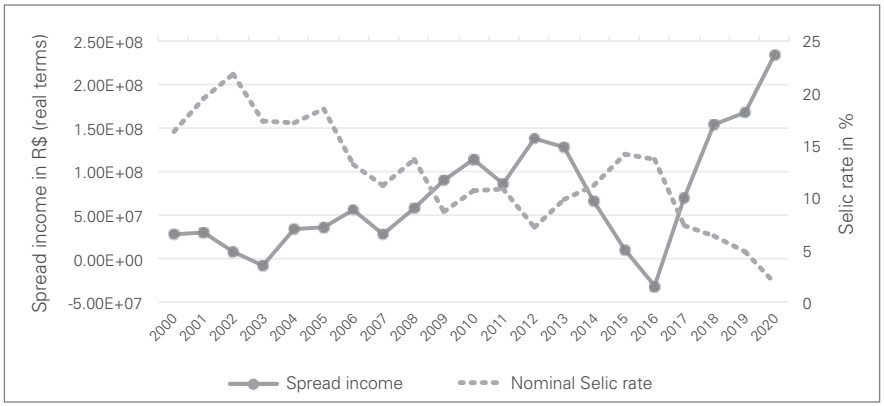
Figure 9: The increasing importance of the spread income



Source: own elaboration. IF.Data, Brazilian Central Bank.
Deflated by the IPCA consumer price (100 = 2000).

The third research question finally tackles the markup theme: is the spread income also correlated to a declining nominal Selic rate? Figure 10 illustrates the relationship and points towards a strong inverse correlation, indicating that the more the nominal Selic rate fell, the higher the spread income in the banking sector. The inverse correlation confirms that institutions are not lowering credit costs under competitive conditions when the Selic rate falls but actively seek compensation.

Figure 10: The spread income and the Selic rate



Source: Own elaboration. IF.Data, Brazilian Central Bank.
Deflated by the IPCA consumer price (100 = 2000).

7. DISCUSSING THE OUTCOMES

Our results uphold Lavinas' et al. (2019) assertion about the increasing relevance of credit in the latter financialization phase: banks' profits depend more on credit operations in the long run. Concerning our second research question, data confirms the importance of the Selic rate in explaining the relationship between credit and security incomes. The strong correlation between the nominal Selic rate and the ratio of security to credit indicates that the declining Selic rate compelled banks to lend and increase their income related to credit. Our third research question, in turn, exposes the logic behind the high banking spread in Brazil. According to the results, the more the Selic rate declines, the more the spread income compensates for the security income losses.

The research also contributes to the rentier-financial class coalition framework (Bresser-Pereira et al., 2020). First, it updates it by exposing a sixth channel through which the coalition operates rentier gains. Unlike the first five channels, which are related to the bond market, the sixth channel works on the credit market, maintaining the banking sector profitability high during low Selic rate periods. Second, it provides further support by reaffirming the coalition's significant influence over both bond and credit markets. As exposed above, in the bond market, the coalition exercises strong influence in the two institutions responsible for promoting the monetary policy in Brazil, the Central Bank and the Treasury. In the credit market, the coalition faces no competition constraints. On the contrary, it uses its monopolistic power to increase the spread income and compensate for losses in the bond market.

Moreover, the data indicate that the rentier channels operate simultaneously, promoting a shielding operation. When the channels in one market fail, the channels in the other are strengthened, safeguarding the sector's high profitability. Compensating incomes corroborates the interpretation that the coalition may be using the

rentier channels to counterbalance losses from the bond to the credit market and vice versa, an intriguing hypothesis for future research to investigate.

Concerning the monopoly power that the coalition exercises in the credit market, here dubbed as the sixth rentier channel, the post-2015 is a paradigmatic phase. During this period, credit income experienced a decline, while the spread income showed an increase. Hence, the results suggest that banks reacted to the crisis by bolstering their markup and shifting the burden onto credit consumers.

Methodologically, what distinguished our research from past ones was selecting a representative sample and analyzing variables from a total income perspective. As demonstrated, this methodological strategy was crucial for overcoming the limits of the spread rate variable. The spread income approach allows us to grasp the logic behind the rentier behavior of the Brazilian banking sector by confirming that the coalition operates by actively compensating for total income variables.

Moreover, an example of the difference between analyzing the spread rate and the spread income can be noticed from 2011 until 2013: when Dilma Rousseff made use of public banks to reduce the spread (Singer, 2015). During this period, the spread rate exposes a declining tendency while the spread income variable continues to mirror the Selic rate – an intriguing mismatching scenario to be further explored. Possible explanations could be reached, we believe, by disaggregating our sample.

From a broader stance, the results also share empirical support with Lavinas' (2019), who stresses the problems of expanding social provision through interest-bearing capital rules. As demonstrated, financial institutions practice high markups, increasing the costs of fundamental rights services. Hence, our research reinforces the claim that financial actors should not substitute public provision.

At last, another question that one could raise from our study is, what declined the Selic rate in the long run? In this line, a stimulating hypothesis is derived from combining our results with the finding of Costa et al. (2017). According to the latter, the Selic accurate long-term rates in Brazil are mainly driven by the US real long-term rates and risk premiums. Raising the question, is the credit expansion process in Brazil, ultimately, a consequence of a monetary subordination condition?

8. CONCLUSION

This research aimed to contribute to understanding the recent financialization trends, in which financial gains became less related to public bonds and more related to credit operations. We analyzed the banking sector using accounting data from a representative sample and studied the evolution of the sector's portfolio. The variables we examined were credit and security income, the two most relevant incomes of the industry, and the spread income, calculated as the difference between credit income and cost of funding. Additionally, we decided to test the importance of one specific determinant, the Selic rate. We questioned: is the Selic rate a critical determinant of the credit expansion process?

Our approach was relatively unique compared to past studies due to three main features: an accounting data approach (ex-post methodology), a focus on studying total incomes, and a long-time period of analysis, which goes from 2000 until 2020.

Concerning questions and findings: our first research question was, has credit income increased more than security income during the latter low Selic rate phase? The results confirmed our hypothesis: banks could increase gains by expanding credit operations. Second, to what extent are the two primary incomes, security and credit, related to the shifts in the monetary policy? The hypothesis to be tested was that both trends should be correlated. Once again, the results confirmed a strong relationship between the declining Selic rate and the ratio between security and credit incomes, which corroborates the interpretation that the Selic rate determines the credit expansion process in Brazil.

The third research question was, is the spread income also related to a declining Selic rate? The data confirmed our hypothesis and exposed a robust relationship between the increasing spread income and the declining Selic rate. A fact that adds interesting input to the common question, why is the spread high in Brazil? The evidence supports a rentier interpretation of profits: past gains derived from a high Selic rate phase were replaced by spread income during the latter credit expansion process.

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