



Economic Benefits of Credit Unions: The Effectiveness of Cooperativism



*Economic Benefits
of Credit Unions:
The Effectiveness of
Cooperativism*

Table of Contents



1. Economic Benefits of Credit Unions	3
2. Banking in Brazil according to the Global Findex and BCB	9
3. The Effectiveness of Cooperativism	14
31. Goals and empirical strategy	15
32. Physical presence as a vector of complete access to the financial system	21
33. Relationship effects on access to credit	26
34. Proximity as a condition for effective banking	32
35. Impacts of the physical branches for legal entities	37
36. Additional Results	45
4. Conclusions	54

1 ● *Economic Benefits of Credit Unions*

The “Economic Benefits of Credit Unions” working paper series



The “Economic Benefits of Credit Unions” working paper series, promoted by Sicredi, aims at **investigating the positive impacts of credit unions in the communities in which it operates**, promoting access to financial solutions and regional development.

Find available studies here

***Economic
Benefits of Credit
Unions in the
Brazilian Economy
(FIPE, 2019)***



In the first work of the series, FIPE (2019) identified the **strong impact generated by the arrival of credit unions** in the economy of municipalities.

Assessing municipal economic variables before and after the opening of a credit union, the study pointed out a **5.6% rise in income per person, 6.2% increase in the formal employment index and 15.7% increase in local entrepreneurship** and other trade variables, when compared to similar municipalities without credit unions.

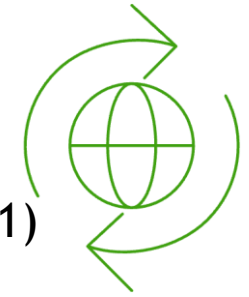
***Impact on
banking inclusion***
*(Juliano Assunção,
2020)*

The work *Impacts on banking inclusion (2020)*, by researcher Juliano Assunção (PUC-Rio), showed that Credit Unions differ substantially from traditional banks because they ***cover more rural, less populated locations, farther away from State capitals.***



Another important finding was that the business model of the credit union system ***Sicredi makes physical branches feasible in municipalities with 2,300 inhabitants or more***, while bank branches require about three times that number. ***Therefore, Credit Unions have the potential to extend their services to 1,900 municipalities that are currently unfeasible for traditional bank branches, and where 9.5 million Brazilians live.***

***Expansion of
Banking
Coverage
(Sicredi, 2021)***



The Expansion of the Banking Coverage (2021) study, authored by Sicredi, assessed service networks of Brazilian Credit Unions, Public Banks and Private Banks from the perspective of **how difficult it was to provide banking services** in certain municipalities.

The indicators developed consolidate the results of the previous study, highlighting Credit Unions as the primary contributors for covering areas where access to banking services is challenging.

In addition to that, they pointed out that ***this role has been reinforced over time***, to the extent that the ***Public Banks have closed branches in more remote locations while Credit Unions/Cooperatives continue their process of inclusive expansion.***

What's next?

Once we assessed the role of Credit Unions in municipal development and expanded banking coverage, the next step would be to analyze the **impact of Credit Unions/Cooperatives on the lives of their members in underserved locations.**

This is the goal of the 2022's work of the series, presented in this report:

*“Economic Benefits of Credit Unions:
The Effectiveness of Cooperativism”.*

2.

***Financial access in
Brazil according to the
Global Findex and BCB***

Effective access to financial services is still a challenge in Brazil, despite progress in recent years. **The Central Bank of Brazil (BCB) has acted strongly in pursuit of this goal through its BC# agenda, in which the credit unions became one of its pillars** to achieve the goals of the #Inclusion dimension.

In a recent report¹, the Central Bank of Brazil analyzed data from the Global Findex (IMF). Research indicates that the **access to checking accounts in Brazil has advanced, with 84% of respondents indicating that they hold at least one account at a financial institution in 2021**, a 14 point increase compared to the last year of the survey (2017).

The figure is an **important milestone for the country towards financial access**, defined here as access to a checking account, driven by the ease of access to digital accounts, the agility of digital payments via PIX, government transfers during the Covid-19 pandemic, among other developments in the National Financial System (NFS). However, **a more careful analysis of the data in the report indicates that there are still challenges for the full access to the financial solutions of the NFS by the population.**

84% of respondents indicate holding at least one account at a financial institution in 2021.

¹Note: no. 7. Global Findex: Brazil in comparison with global players. Série cidadania financeira: estudos sobre educação, proteção e inclusão / Banco Central do Brasil – Brasília : Banco Central do Brasil, 2022.

Still in the report¹, it is noted that, among those who have a bank account, **only 71% made a deposit or a withdrawal during the year. That is, only 60% of the population make recurring use of their account.** In the same direction, we find indicators of **possession of a credit or debit card, which reach 70% of the interviewed population, but their use rate is only 55%.**

Information on **the unbanked (those who do not have a bank account)** also provides **important insights about the difficulties perceived by the population regarding the use of accounts**, which can affect not only this audience, but also those who have an account and do not make recurring use of it. **Among those without access to banking, 67% state that they do not have a bank account due to its high cost and 63% due to lack of resources.**

Among those without access to banking, 67% state that they do not have a bank account due to the high cost and 63% due to lack of resources.

The data shows that **there is a lack of financial knowledge by part of the population and a need for advice**, since free solutions are available with low-cost services that can bring greater convenience and security to Brazilians of all incomes.

¹Note: no. 7. Global Findex: Brazil in comparison with global players. Série cidadania financeira: estudos sobre educação, proteção e inclusão / Banco Central do Brasil – Brasília : Banco Central do Brasil, 2022.

Some particularly important results point to the limits of digital accounts in the financial inclusion process. **Possession of mobile phones by 85% of people, and Internet access by 78%, indicate that a portion of the population still needs a financial institution branch to access the NFS.**

In addition to the lack of proper resources to access digital banks, the investigation also points out that **proximity ties in the provision of financial services still play an important role in the relationship.**

Among the unbanked, **33% say that the distance is an impediment to the use of Bank services.**

33% state that physical distance is an impediment to the use of banking services.

Consequently, **physical expansion to municipalities without banking services continues to promote access to financial products and services, and credit unions have played an important role in this process of financial inclusion**, as evidenced in Assunção (2019) and Sicredi (2020).

¹Note: no. 7. Global Findex: Brazil in comparison with global players. Série cidadania financeira: estudos sobre educação, proteção e inclusão / Banco Central do Brasil – Brasília : Banco Central do Brasil, 2022.

Another important result brought by the BCB report indicates that the population perceives financial products as complicated, due to the high complexity of the products and services offered by financial institutions.

“41% of respondents who do not have an account stated that they would not be able to use a bank account without help, demonstrating that, in fact, the lack of knowledge or insecurity about financial matters is present in the daily lives of this public.”

Therefore, we continue to **believe in the importance of proximity in promoting complete access to financial services**. This channel retains its relevance even in times of digitization,

In this context, **financial advisory services at the branches are an important tool for building trust, adequacy and improvement of the financial health of the population when accessing these resources.**

In the next pages, we will bring evidence of the **important role that physical presence plays on the financial dynamics of the assisted members, through the study *Economic Benefits of Credit Unions: The effectiveness of cooperativism* (Assunção and Mallmann, 2022).**

The results indicate that proximity is still a critical factor for **financial inclusion, defined as effective access to credit, savings, payments, insurance, pension and investment services.**

¹Note: no. 7. Global Findex: Brazil in comparison with global players. Série cidadania financeira: estudos sobre educação, proteção e inclusão / Banco Central do Brasil – Brasília : Banco Central do Brasil, 2022.

3. *The Effectiveness of Cooperativism*

3.1.

Main Goals and empirical strategy



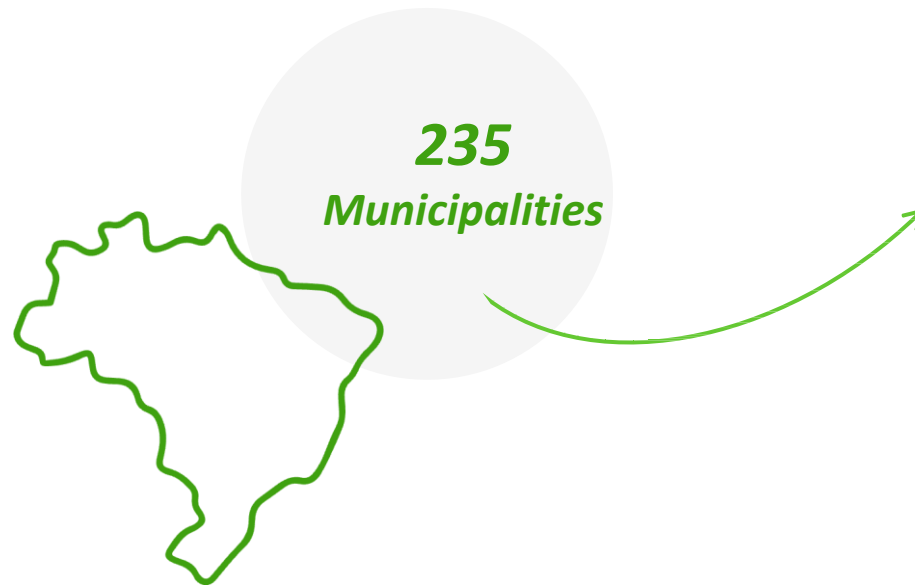
The Economic Benefits of Credit Unions, in its first three publications, showed the **strong positive impact that opening a credit union has on the socioeconomic conditions of the region in which it operates and the cooperative service network's inclusivity**, through the analysis of municipal data.

Nonetheless, a question remained: *How does the establishment of a Credit Union, in a previously underserved region, impact community members' access to financial products and services?*

In 2022, with researcher Juliano Assunção (PUC-Rio) we aimed at measuring the role of these branches, established in municipalities with no other bank branches, on the local population's access to the National Financial System and a wider range of complex financial products, other than checking accounts. These results are in the fourth edition of the working paper series *Economic Benefits of Credit Unions: The Effectiveness of Cooperativism*.

Choosing Municipalities

For the investigation, we selected **235 Brazilian municipalities** which had a Sicredi physical branch, but do not have units from other FIs.



The choice to study only municipalities without any competition was twofold:

- 1 | we were able to isolate Sicredi's impact on the community
- 2 | we managed to dynamically analyze the effect of physical presence on a municipality that, until then, only had easy access to digital channels.



The sample includes municipalities from all Brazilian regions, except the Northeast. There is a predominance of municipalities in the South and Central-West, due to Sicredi's greater presence in these regions.

Data

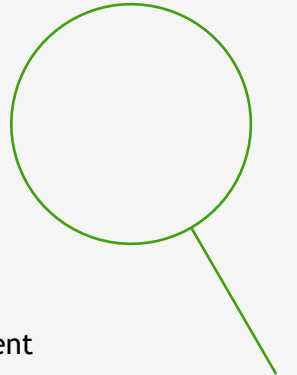
Sicredi's internal data on individuals were used. In some sections, we use **member data available in the Credit Information System (SCR)**, from the BCB, referring to **volume and type of credit** contracted throughout the NFS (banks, finance companies and credit unions).

The database has monthly information from 2018-2021, from which analytical sections from July and December of each year were used. The opening dates of each branch were also used.



In total, the sample contains more than 1.8 million observations that represent, on average, 229,000 members. The analyzed categories are:

- Relationship time
- Gender
- Segmentation of the audience
- Revenue
- Volume and modality of credit granted in the NFS
- Number of FIs with relationship
- Solutions per Member Index (ISA)
- Principality Score
- Contribution Margin
- Time deposits
- Savings account
- Rural credit
- Overdraft Limit Protection
- Business credit
- Acquisition
- Collection
- Residence
- Payroll
- Payments
- Supplier payment

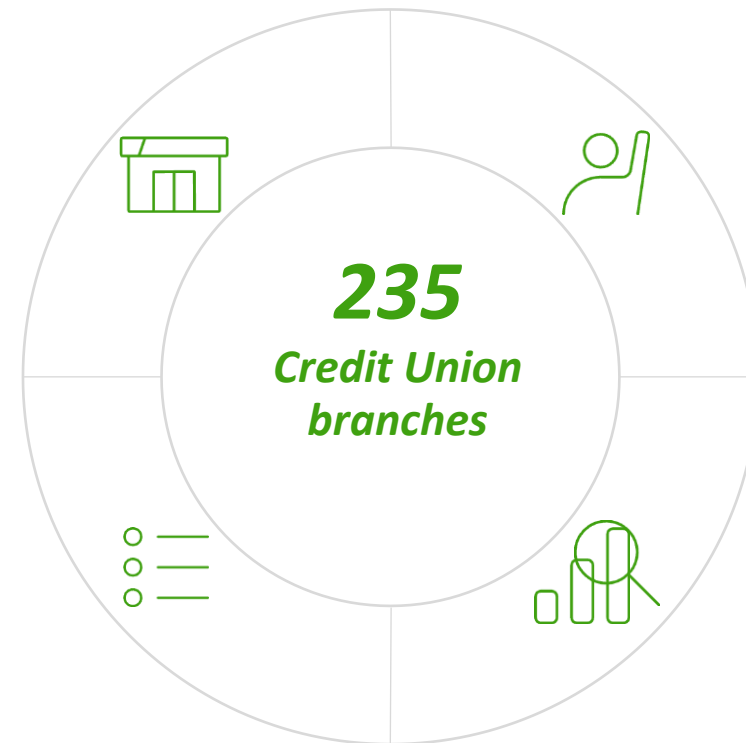


Empirical Strategy

The data panel has **branches** and **members** at different degrees of maturation.

The **235 service units** include branches that were opened within the interval and others with over 30 years. Similarly, the range of members varies from new members in the period, to some others with decades of membership.

Thus, the **empirical strategy** is based on **emulating the evolution of the variable** over the **maturation time** of the branch or **length of relationship with the member**. The analyses, therefore, **do not follow the calendar year**, but seek to study the expected behavior of the variable in 6 months, 1 year, 2 years and so on.



In order to clarify the concept, **let's see the example of a fictitious evolution of the variable Solutions per Member Index (ISA) over the period of membership.**

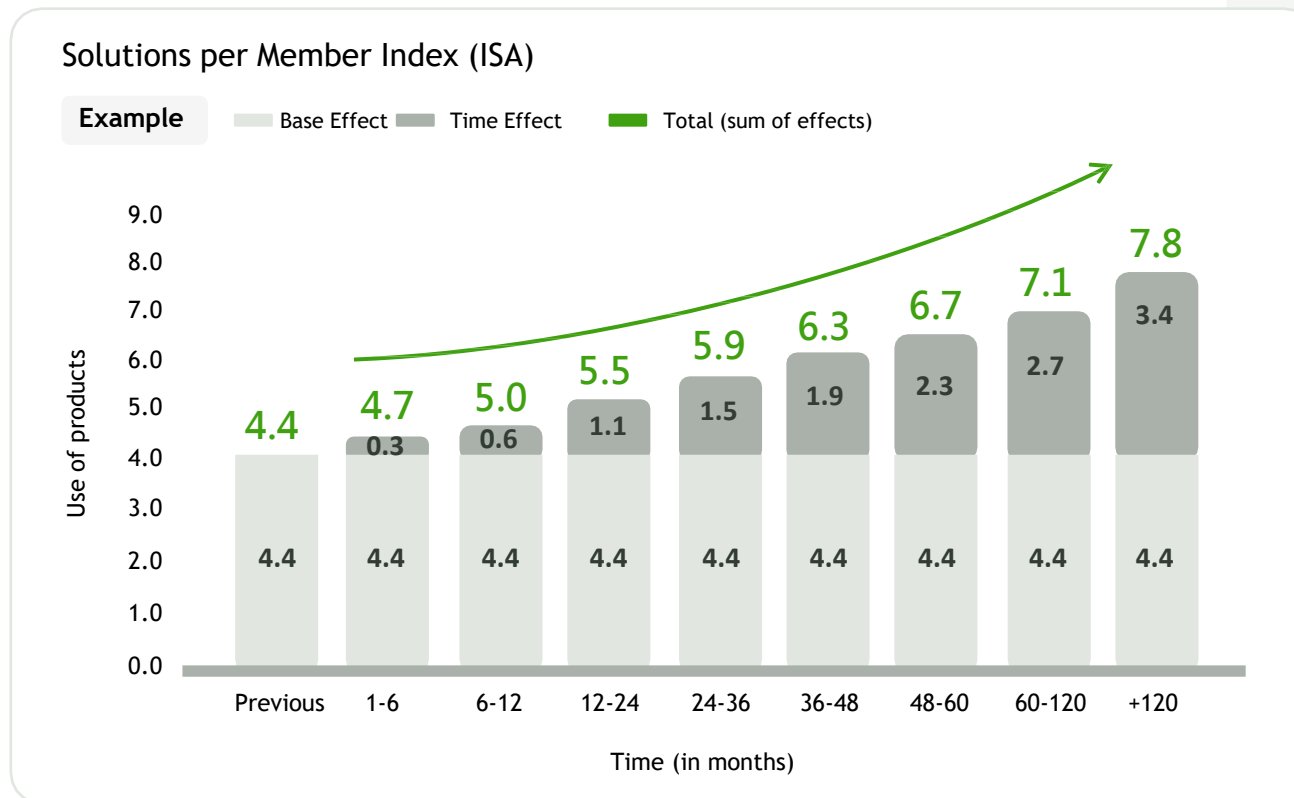
We used all members with 0-6 months of engagement to characterize the average behavior in that time frame, all members with 6-12 months to characterize the following time frame, and so on and so forth.

The result shows the typical behavior of the variable over the membership time.

As our interest rests solely in the **effect of branch membership/maturation time** over the variable, **we control other factors that may influence the analysis with a fixed effect variable.**

The **fixed effect variable allows us to characterize all factors, and the time of membership or branch maturation**, such as: differences in the behavior of branches, regional characteristics, usage, public, etc., which affect the ISA. **The average of the individual fixed effects are called, in the presentation below, the base effect.**

Reading the Results - Example



All analytical charts will follow the above pattern.

The example graph shows the average behavior of the analyzed variable over the maturity of a branch.

The light bars show the **base effect**, the average behavior prior to the establishment of a branch, while the dark bars show the **time effect**, that is, the increment in the average behavior over the maturation time.

In this example, members used on average **4.4 Products** before the establishment of an branch in their municipality. After opening the branch, the average use of products rises to about **5.9 products** after 2 years of the opening, and surpassing **7.1 products** after 5 years.

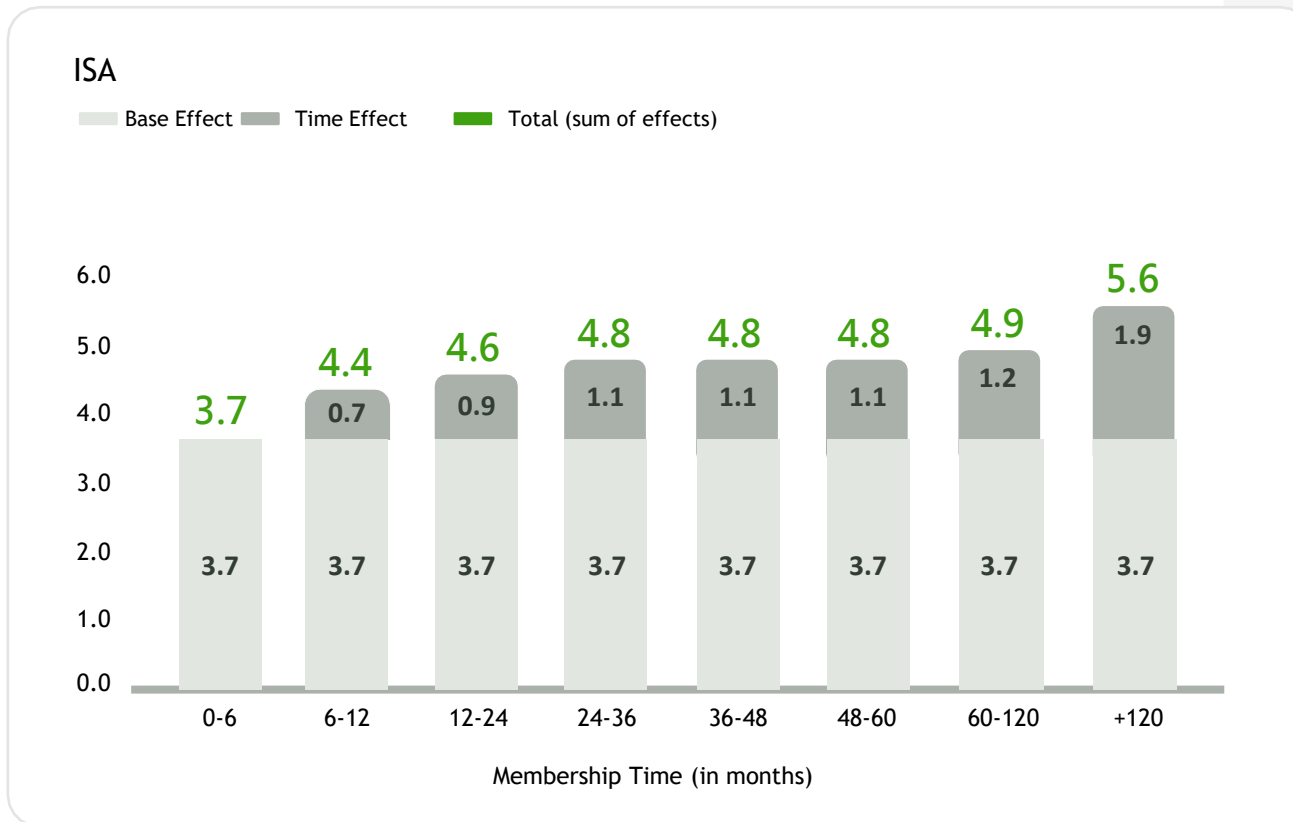
3.2. *Proximity as a vector of complete access to the financial system*



In this second section of the study, we will look at the evolution of different relevant variables over our members' engagement period. To this end, we monitored all members of the 235 municipalities studied.

We managed to characterize to what extent **building ties with Sicredi credit unions expands access to financial products and improves the financial health of members.**

Branches expand the use of financial services



A high number of services used in the first six months of membership, with an average of approximately 3.7 services, indicates that members arrive at the institution with **needs that go beyond basic financial operations** such as checking accounts and payment solutions.

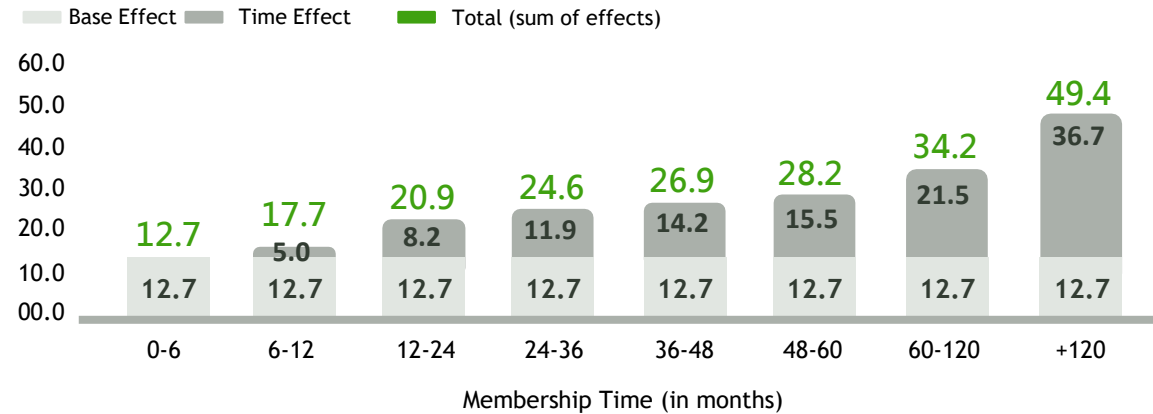
Time evolution shows an increasingly intensive use. **There is an approximately 30% increase in service usage after 2 years of membership, and 50% after 10 years.**

We believe that the **proximity is a relevant factor in building mutual trust and advising on suitable financial products**, contributing to this increase.

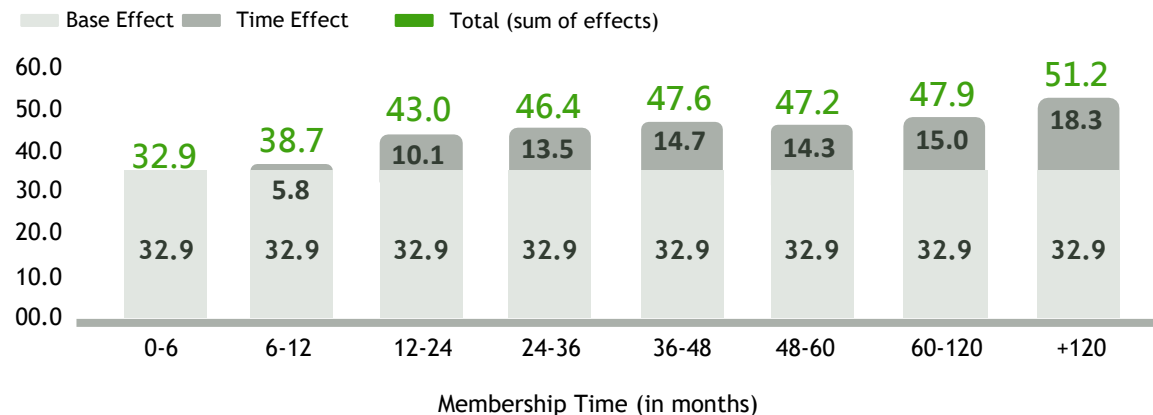
The Solutions per Member Index (ISA) measures how many different services are used by Sicredi members in each period.

Proximity promotes the improvement of the financial health of members

Term Deposit (in %)



Savings (in %)



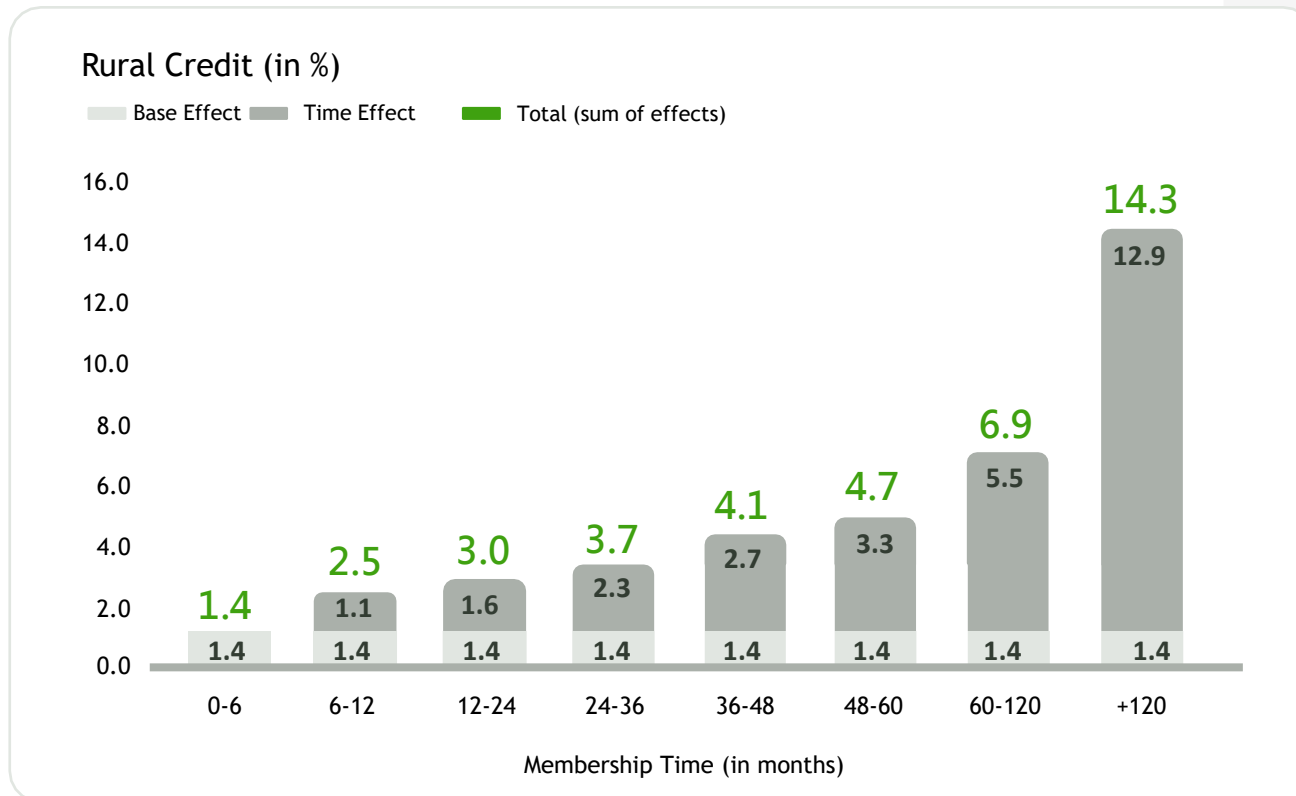
The financial investment indicators show that the length of relationship with credit unions has a strong impact on the propensity of members to save money.

About 33% keep their money in savings accounts already at the time of membership, while 13% invest resources in time deposits. The percentage of members who keep resources in the credit union goes up considerably over time, doubling for Time Deposits after 3-4 years of membership.

The activities of promotion of financial education and advice offered by branches to members may contribute to this result.

The Time Deposit and Savings indicators show the relative number of members who have each of these products in the analyzed period.

Credit Unions continue to be strong promoters of Rural Credit




The last result of this section shows **the relevant role of credit unions in promoting rural credit in Brazil.**

The effect of length of relationship on this variable is the strongest in relative terms. The **number** of members who use the service doubles after one year of relationship and grows almost 165% soon after 3 years, gaining relevance in an accelerated way in the later periods.


The growth can be explained by two main factors: the migration of rural credit to Sicredi due to greater convenience and attractiveness and the access to new products tailored to people's needs.

The Rural Credit indicator shows the relative number of members that have this product in the analyzed period.


Key Results



Members show **high and growing use of services** in places where only Sicredi has a service branch, indicating that the branches remain relevant for complete access to financial services, especially those of greater complexity.



Proximity seems to be a great promoter of savings in local communities, where the number of members with invested resources increases substantially over the period of membership.



Sicredi has the role of significantly expanding the number of members with access to rural credit instruments in these locations.

3.3.

Relationship effects on access to credit

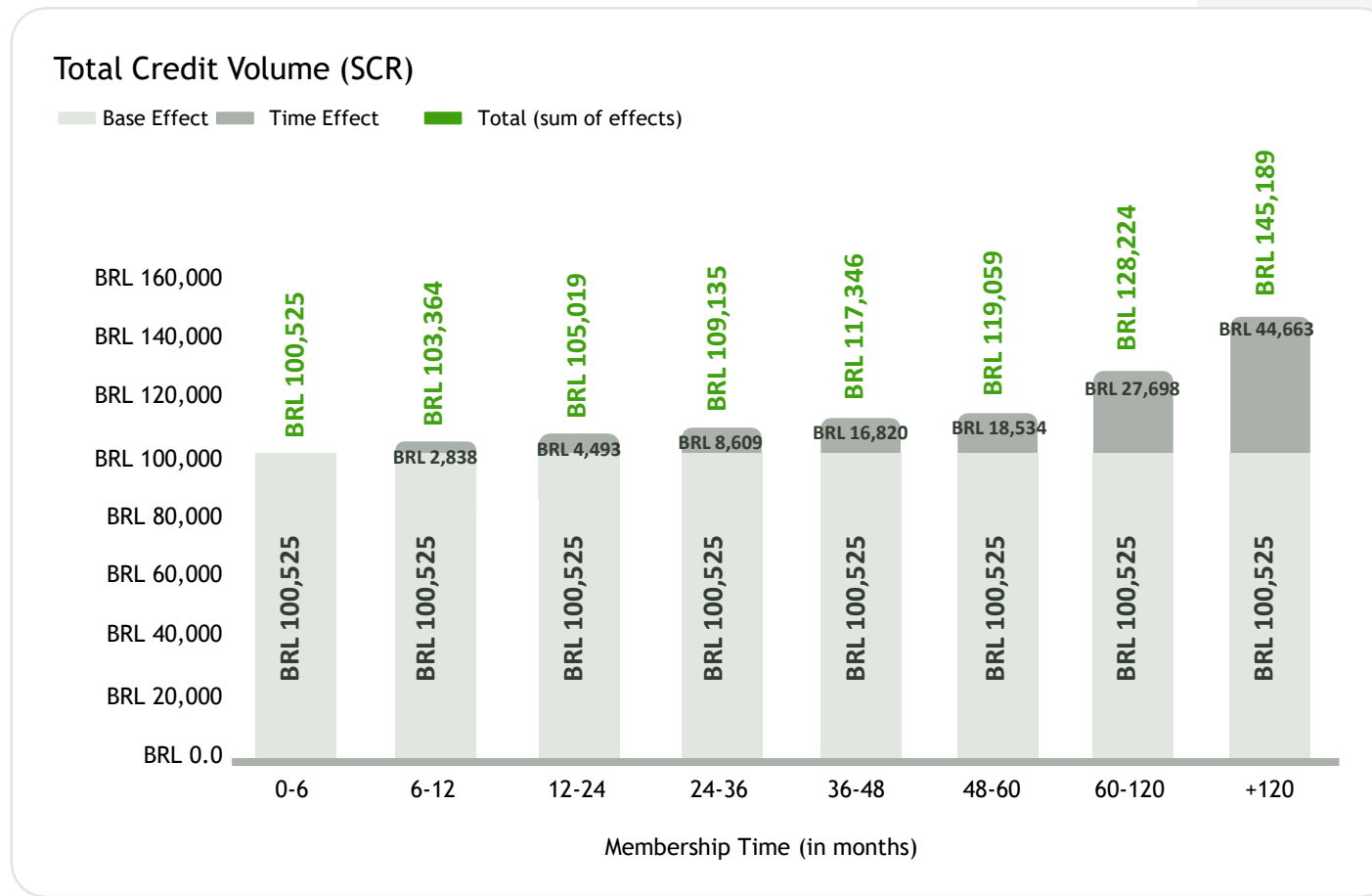


In this section, **we investigated the evolution according to the time of membership of some credit variables of the members** in the municipalities investigated with the National Financial System, according to the SCR base of the Central Bank of Brazil.

Credit volumes include the balance of each member in all financial institutions in Brazil, not only with Sicredi.

The time evolution follows membership time.

Relationship expands access to credit



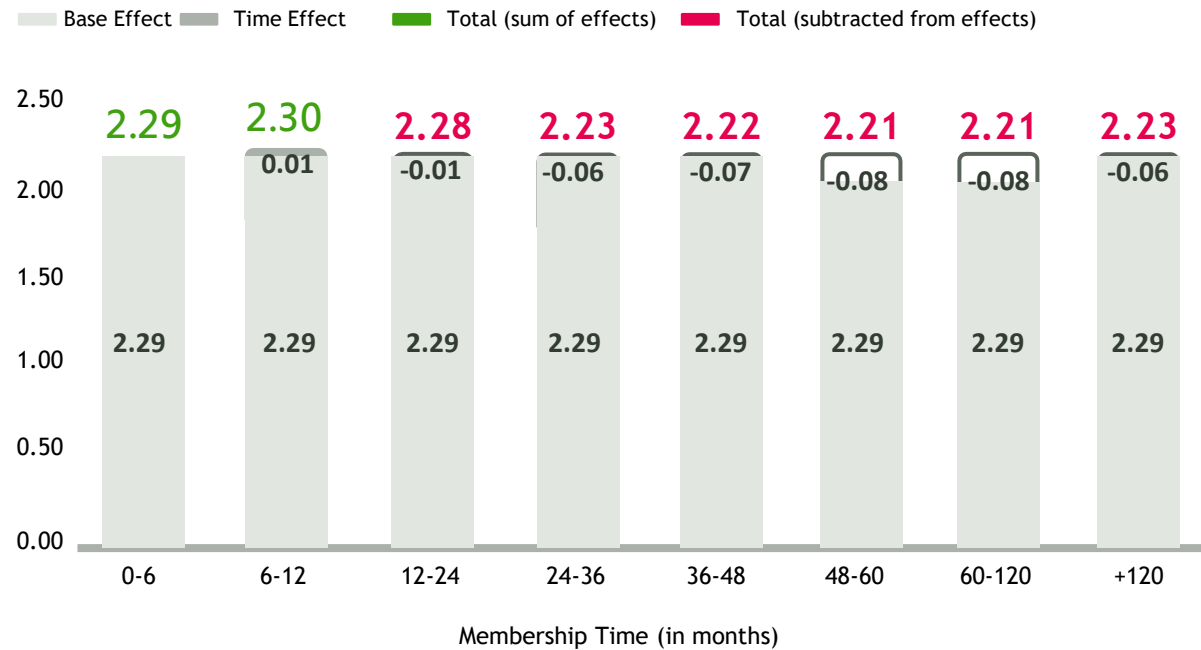
When considering the total volume of credit in the National Financial System, the average balance presents itself in a **high level already in the first months of membership and grows throughout the duration of the relationship with the member.**

The high initial level reflects both active loans in other institutions and the **less restrictive nature of concession in credit unions allowed by proximity.** Knowledge of the local public allows a **significant reduction of information asymmetry**, as evidenced by previous studies.

The high average balance is explained by the presence of companies and rural producers in the member base under analysis, activities that demand more expressive volumes of credit.

Members focus their relationship on fewer FIs

Number of Institutions (SCR)

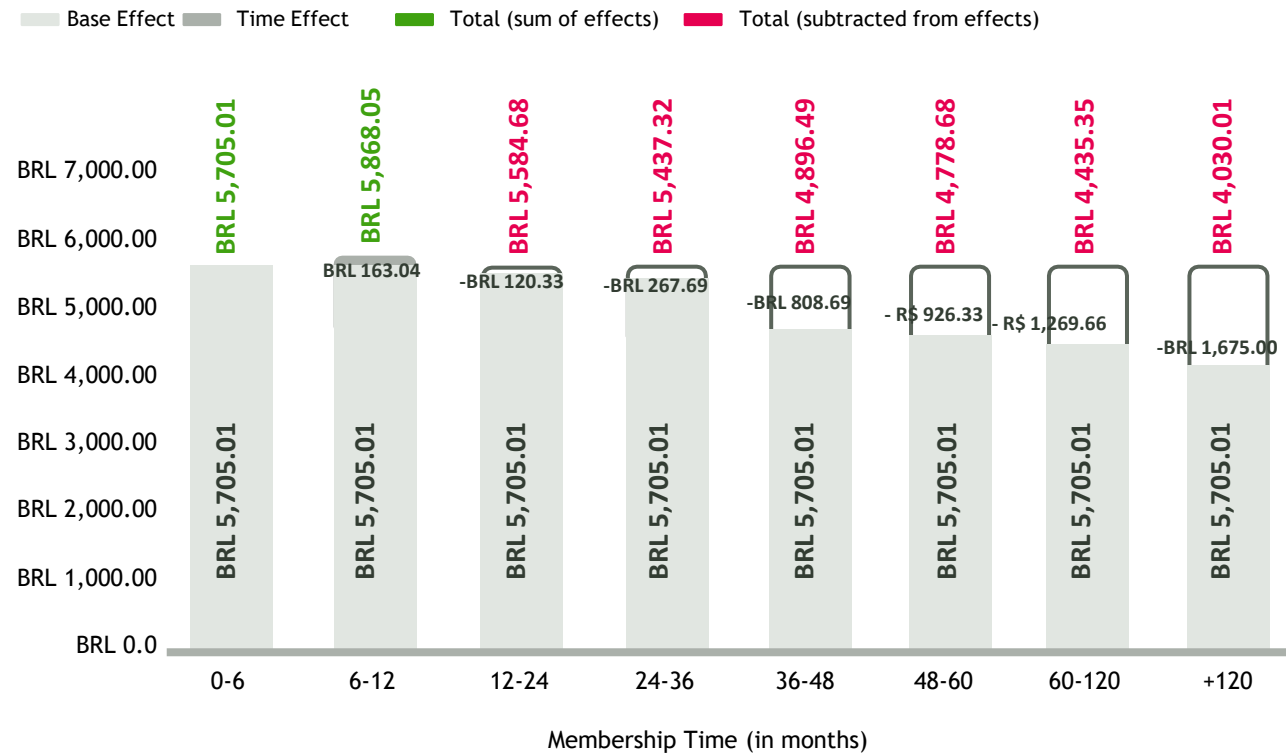


The analysis of the number of Financial Institutions with which the members maintain a relationship indicates a concentration of their financial life in fewer institutions over the course of membership.

The result indicates that Sicredi is able to provide a number of comprehensive solutions through the establishment of the physical channel, leading to increased loyalty levels.

Change in credit profile between members

Payroll-Deducted Personal Loan



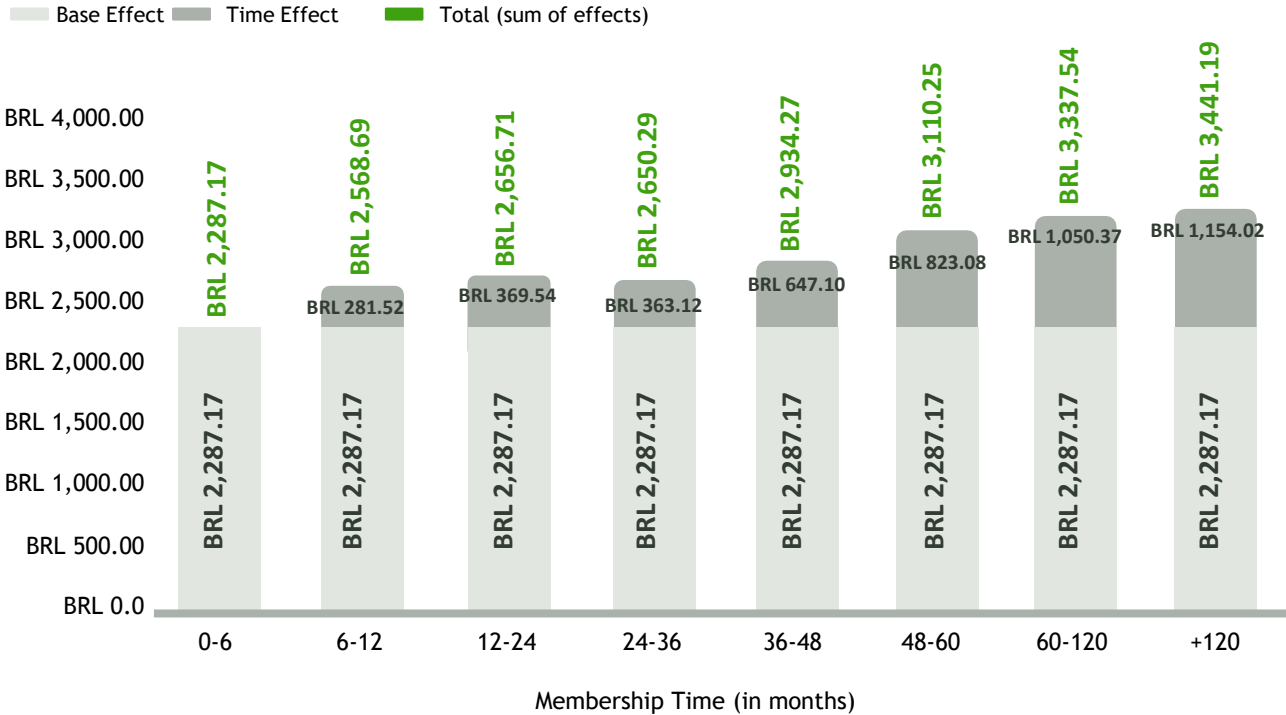
The analysis of the credit balance held by members in the Financial System by profile also generates important insights into Sicredi's performance.

When the evolution of payroll loan balances per time of membership is verified, there is a noticeable drop in the average volume from the second year of membership onwards.

The result can be explained by different factors, among them greater financial health of Sicredi members, which leads to less need for this modality, often used for unplanned expenses.

Greater availability of unsecured loans

Personal Loan - Not Payroll-Deductible



On the other hand, **personal loans that are not payroll-deductible increases over the period of membership.**

Joining the community is a key element for understanding this change in profile. **Greater knowledge of economic dynamics and the reality of members allows for a better allocation of credit in a less restrictive manner and less demand for guarantees.**

So there is an important inclusive effect, **by allowing access to credit for members who do not have guarantees, such as self-employed professionals, informal workers and small businesses.**

Key Results



The inclusion promoted by the work of credit unions in underserved municipalities allows access to greater volumes of credit over the period of membership.



There is a tendency to reduce the number of FIs with which members have a relationship, proving that they found a more appropriate and comprehensive services, which reduces the need to pulverize the search for solutions.



Sicredi's activities allow greater availability of unsecured credit resources for members, promoting the inclusion of a segment of the population that often have more restricted access to the NFS.

3.4.

Proximity as a condition for effective financial inclusion

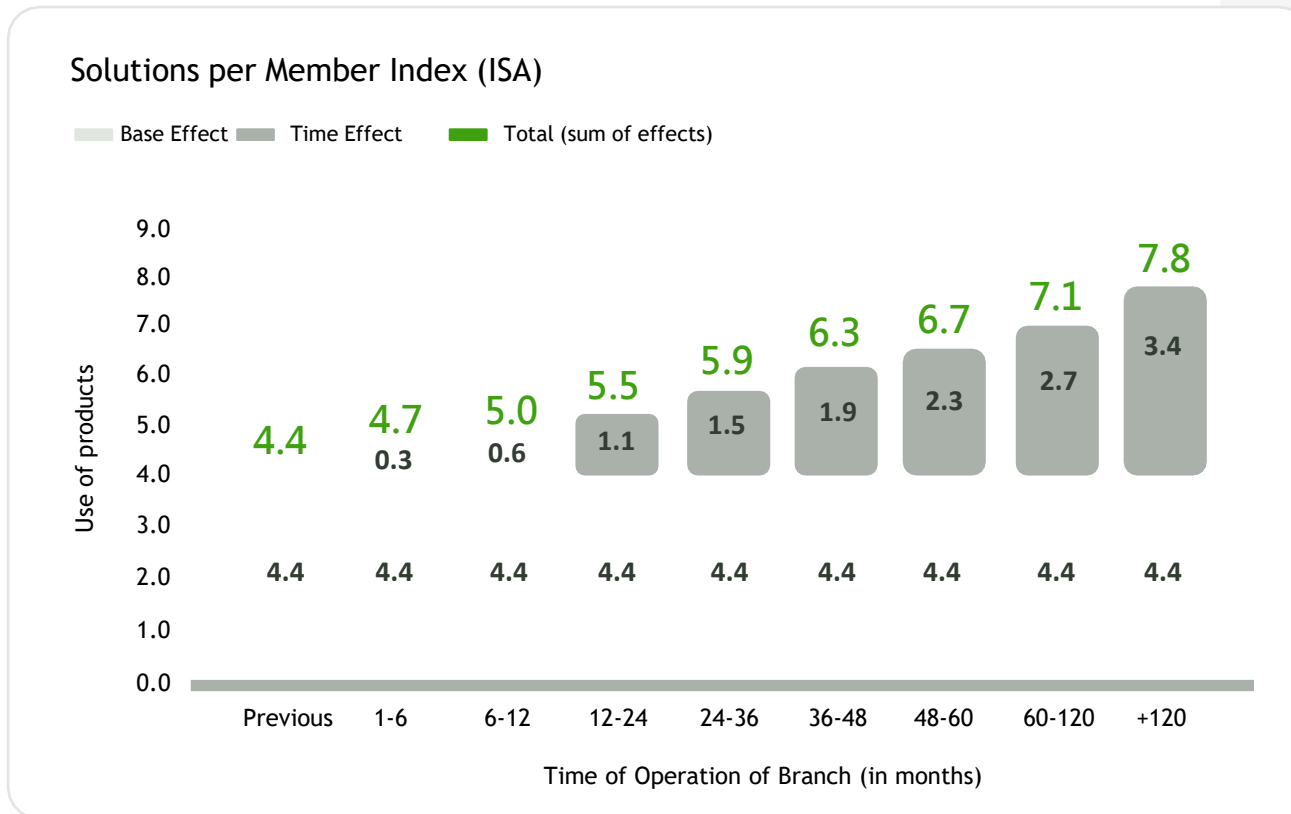


In this section, we focus on analyzing the **physical channel effect more purely**. In order to achieve that, we selected a **subsample of members who already had a relationship with Sicredi prior to the opening a branch in their city of residence**.

Consequently, we were able to track the typical journey of the members who already had access to all the financial services offered by Sicredi through digital channels, **and how the new branch deepened their relationship with the institution**.

The time evolution of this section **follows the Time of Operation of the Branch**.

Physical presence promotes access to a wider range of financial services



The graph indicates that **this subgroup of members already had a wide use of products**, whether via digital channels or branches from neighboring municipalities.

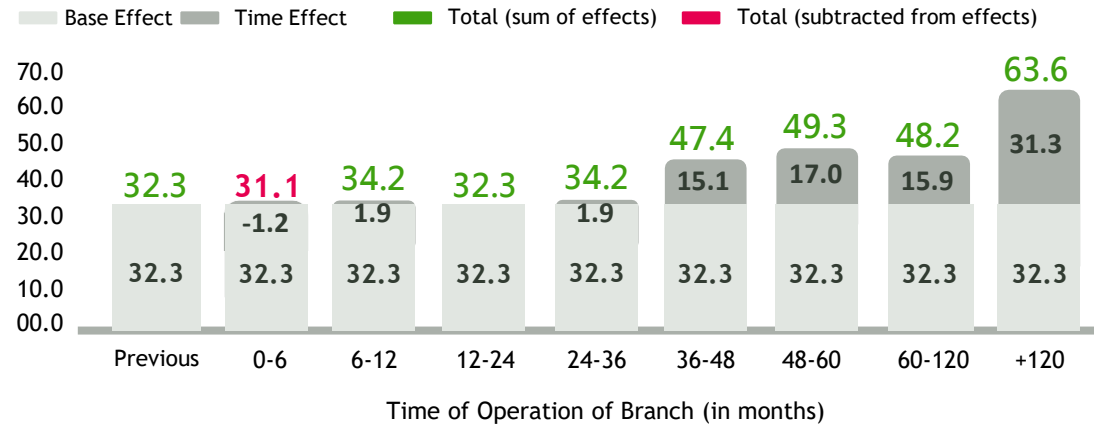
As the branch matured, the **intensity of use becomes even more expressive**. There is an average rise of 1 product after 1 year, and about 2 after 3 years.

The result indicates that, **even if previously available, members benefit from the physical channel to expand their access to financial products**. That can be explained by in-branch advice, which helps in the search for the most suitable products and in understanding the benefits of complex financial services.

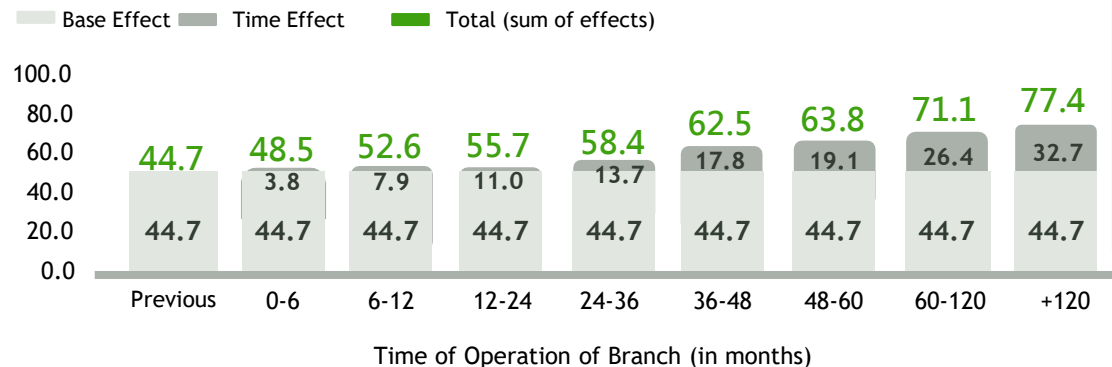
The Solutions per Member Index (ISA) measures how many different services are used by Sicredi members in each period.

Incentives to savings rises with the branch

Term Deposit (in %)



Savings (in %)



A significant increase in the number of members with financial investments is perceived. The high results prior to opening indicate that this subgroup already had membership time effects (section 3.1).

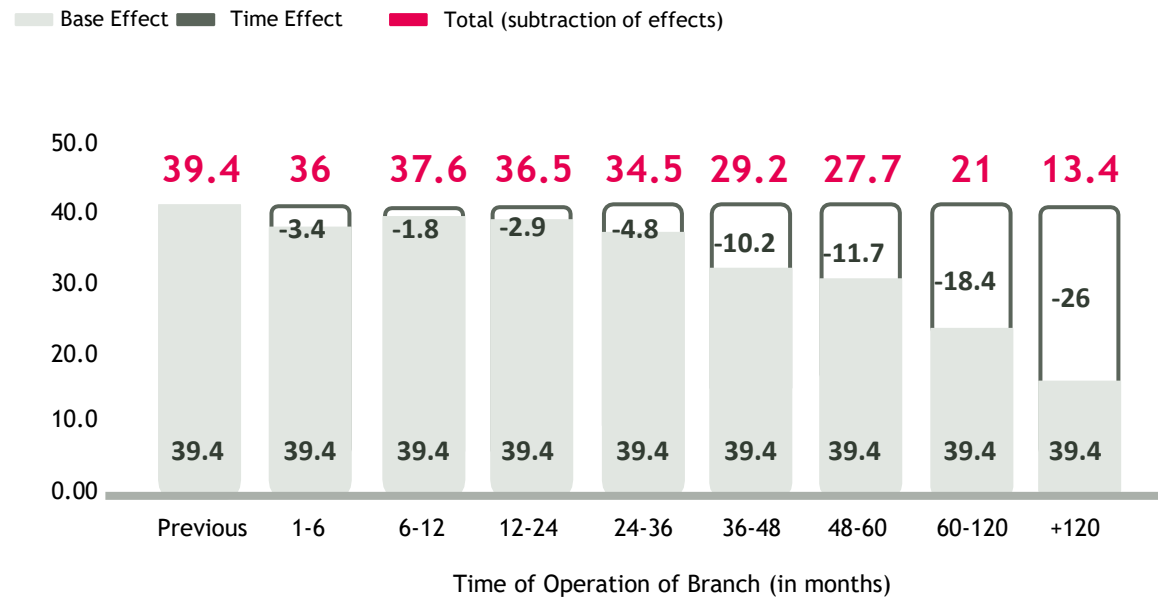
Even so, the opening of the branch showed a strong increase in the adherence to time deposits and savings, indicating an important effect of the physical channel on product promotion.

Among the factors that can explain the result we have increased trust in the institution and the promotion of financial education.

The Time Deposit and Savings indicators show the relative number of members who have each of these products in the analyzed period.

Access to the physical channel improves financial health

Overdraft Limit Protection (in %)



An interesting result was the effect of opening the physical branch on the use of overdraft by this group of members.

Results show that before the opening of the branch there is a more widespread use of the product, by 39.4% of the members, which reduces significantly over the months.

A relevant factor for this trend may be the promotion of financial education by the branches, showing that proximity benefits go far beyond expanding the range of products available, but also the better adaptation of these to the reality of the members.

The Overdraft Indicator shows the relative amount of members who have this product in the analyzed period. For Overdraft Limit Protection, the actual use of the credit in the reference month is considered, not just the availability of the limit.

Key Results



The establishment of a physical branch in the municipality of residence promotes greater use of solutions even among people who were already members of Sicredi previously, indicating that only the availability of products through digital channels is insufficient for effective access.



The branch also becomes a promoter of greater financial health among members, which show greater use of financial investment services such as Savings and Term Deposits and less use of emergency credit, such as Overdraft.

3.5.

Impacts of the credit union branch over legal entities financial access

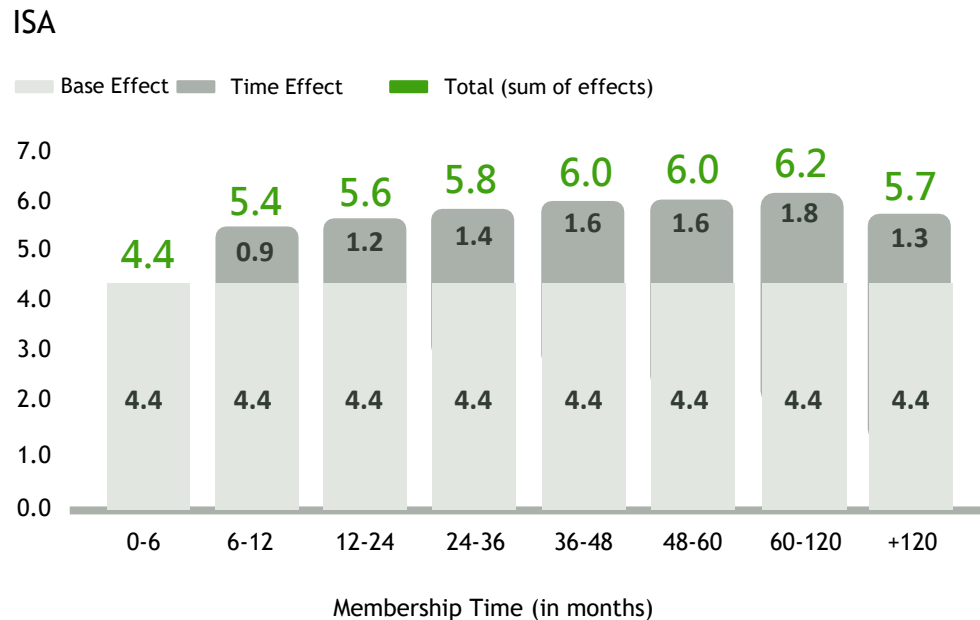


In this section, we assess the **subsample of the Legal Entity members of the municipalities analyzed**, to investigate whether the physical channel has specific characteristics in this segment.

We consider that to be a relevant segment, because **corporate clients tend to have needs for more complex financial products and a more intensive relationship with their FI**, as well as fewer solutions provided by digital banks to this public.

The time evolution of this section is **again Membership Time**, with the reference at **0-6 months**.

Legal Entities make more intensive use of products and the relationship leads to more substantive rises



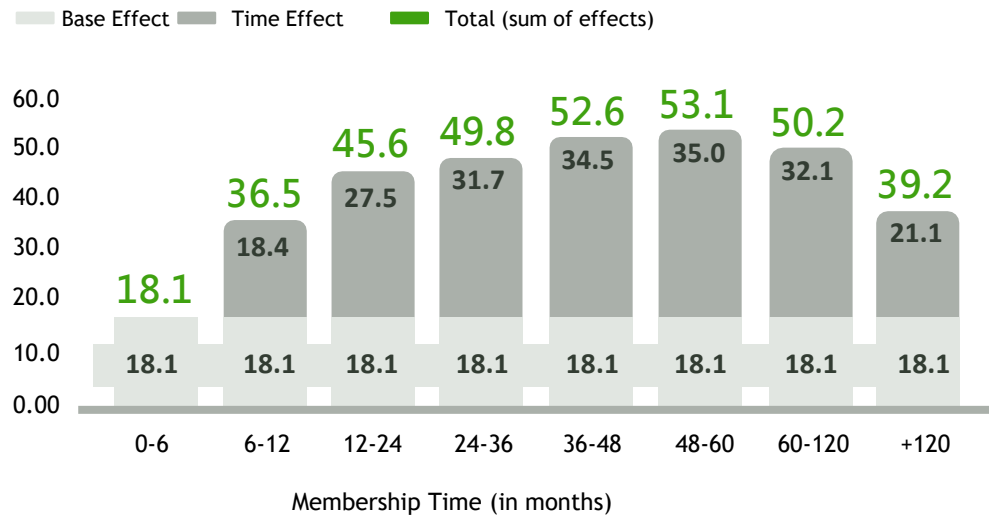
The analysis of the use of services indicates a **more intensive use by legal entities at the time of membership**, when compared to the overall result (section 3.1).

0 time increment also indicates a **more intensive search for solutions over the membership time**.

The result shows that **this segment has broader financial product needs**, justifying the specific analysis.

Commercial credit is the main demand of legal entities

Commercial Credit (in %)



Commercial credit is the product with the most significant adherence among Sicredi members in the investigated locations.

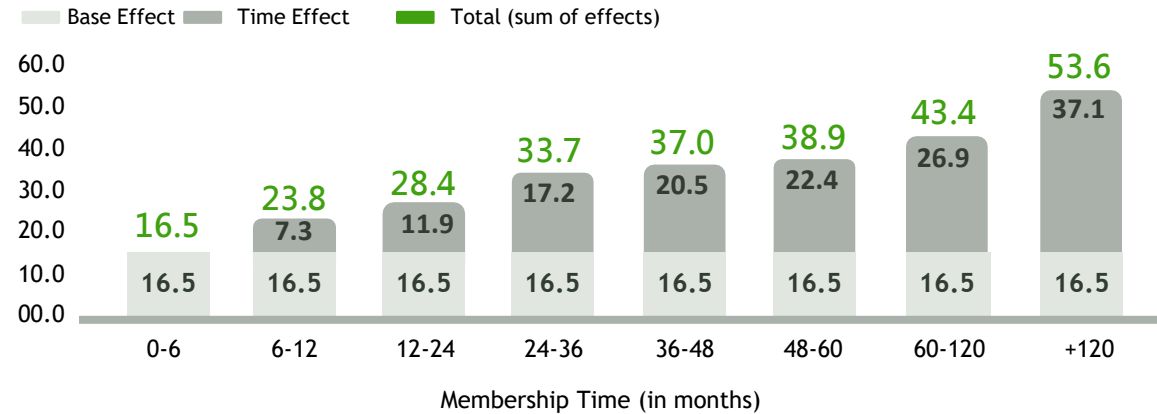
The portion of members who have credit products doubles before the first year of membership, with strong growth up to the second year, from which it remains relatively stable.

The result indicates a strong demand for credit by this public and shows that proximity allows for a proper risk assessment and availability of credit in a maximum of two years, with a significant part already achieved in the first twelve months.

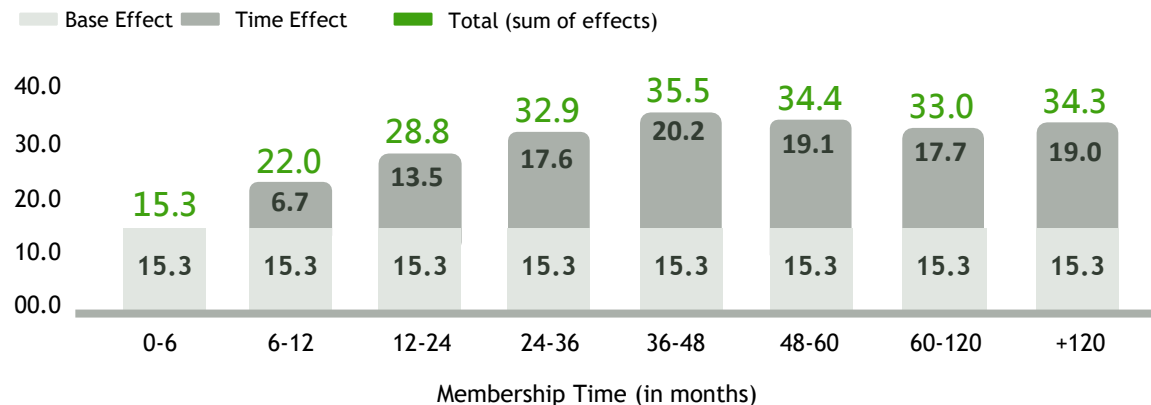
The Commercial Credit indicator shows the relative number of members who have this product in the analyzed period.

Financial investment solutions prove to be attractive to the public

Term Deposit (in %)



Savings (in %)



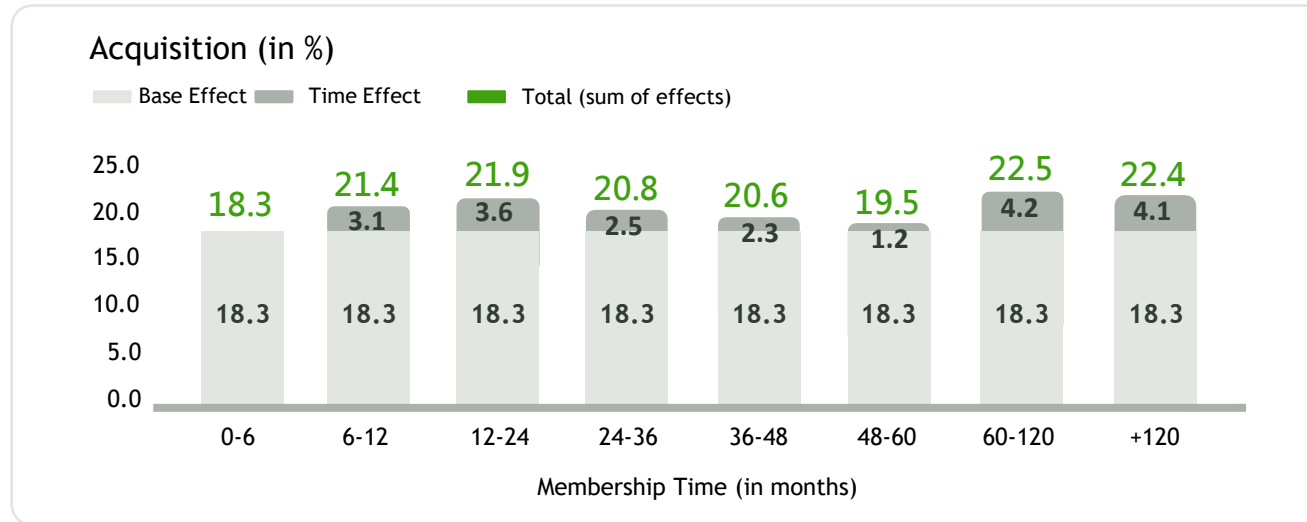
A Comparison with the general result indicates that legal entities show strong preference for allocating their resources in Time Deposits.

The relative amount of members with the product **doubles after 2 years of membership, with accelerated growth** in the following years.

The result indicates that **building the relationship allows for attractive and suitable financial investment solutions** provided by credit unions to these publics.

The Time Deposit and Savings indicators show the relative number of members who have each of these products in the analyzed period.

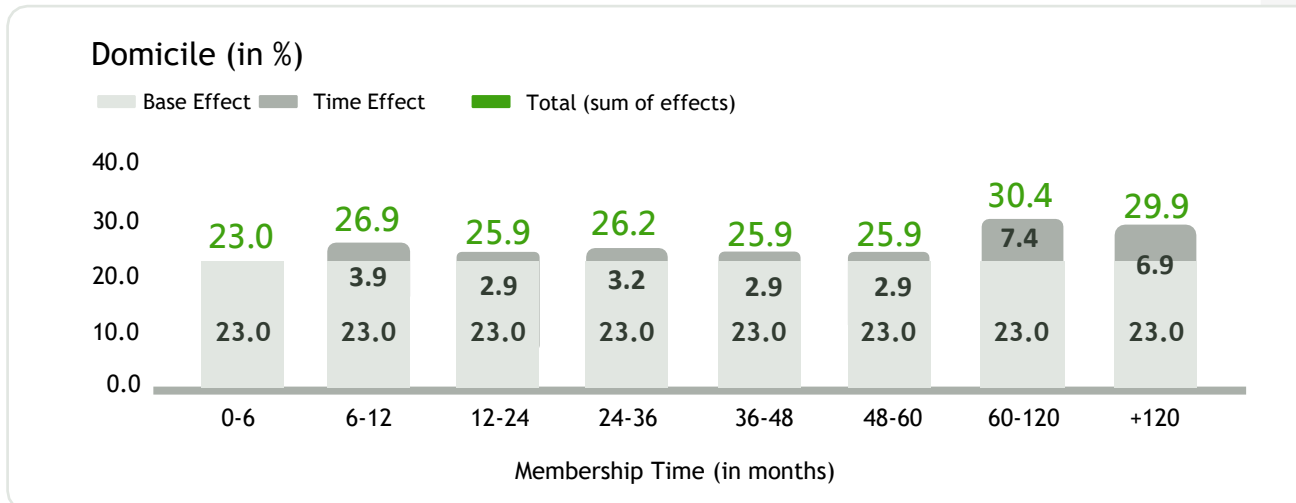
Length of relationship has little impact on widely available products



The impact of relationship time on Acquiring products (debit and credit card terminals) and Domicile (account for receiving payments) is not very expressive.

The result can be explained by the low risk and low complexity attached to these products, which allows for wide availability in the market.

This interpretation strengthens the thesis that the greater relevance of the physical channel is found in more complex products such as credit, investments and a number of services that will be mentioned ahead, commonly with greater scarcity of access.

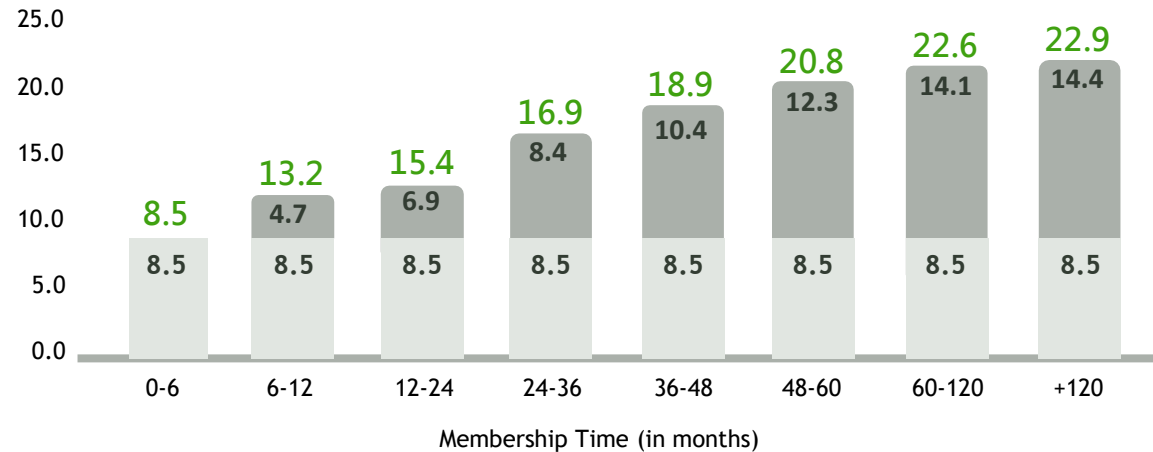


Acquisition and Domicile indicators show the relative number of members who own each of these products in the analyzed period.

Complex services benefit most significantly from the branch

Collection (in %)

Base Effect Time Effect Total (sum of effects)



An interesting case to be analyzed is the **collection product (issuance of bank slips)**.

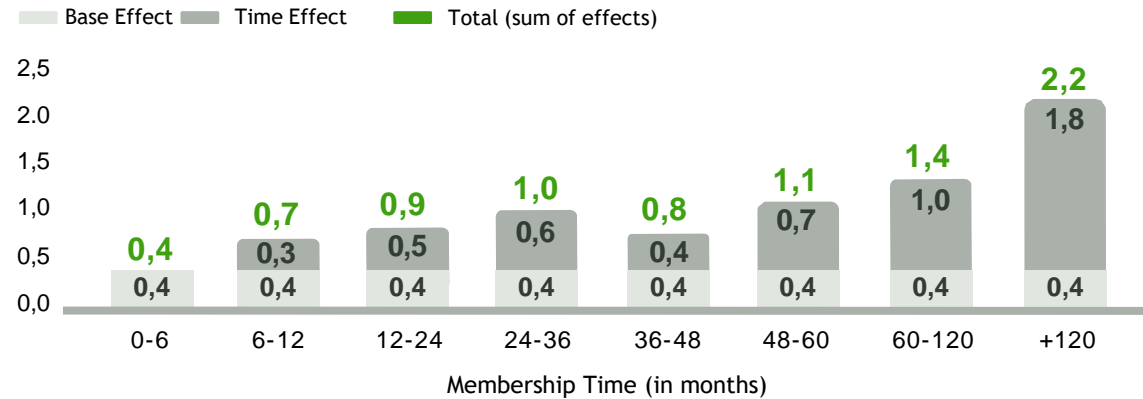
The product features a **strong adherence with members throughout the relationship time**. There is continuous growth in the percentage that uses the service.

The result shows that the **benefits of physical presence are not restricted to a more assertive offer of credit** by reducing information asymmetry, but they also allow access to a wider range of products.

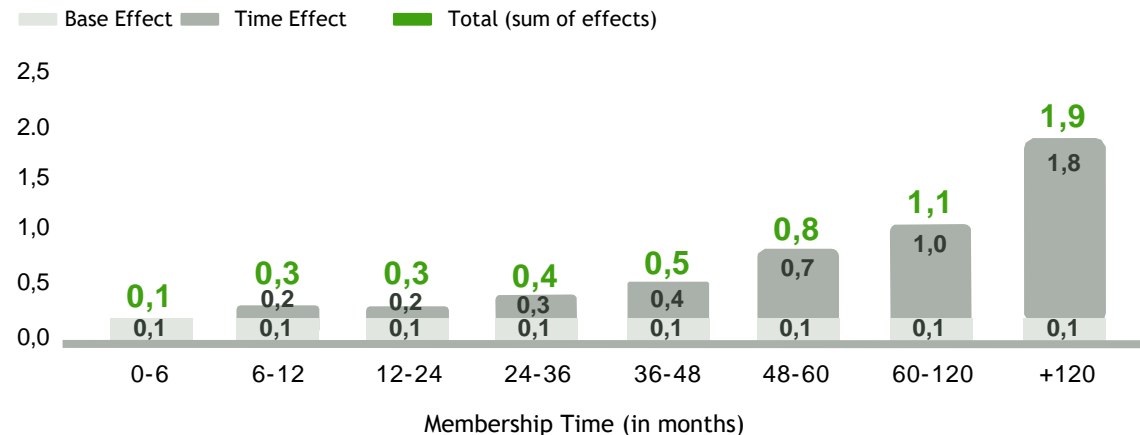
The Collection indicator shows the relative amount of members that have this product in the analyzed period.

Complex services benefit most significantly from the physical channel

Payroll (in %)



Supplier Payment (in %)



The strong effect of membership time can also be seen in the use of Payroll and Supplier Payment products.

The last three results may indicate that, **through the physical channel, the credit union is able to broaden its understanding of the needs of the corporate member, presenting new solutions for their business.**

Thus, in the context of more complex or less popular financial products, the advice of the **physical channel plays a key role in providing new solutions.**

The Payroll and Supplier Payment indicators show the relative number of members who have each of these products in the analyzed period.

Key Results



As in the general case, physical presence promotes greater use of services by legal entities' members. This segment tends to use, on average, a higher number of solutions when compared to individuals.



The products most sought after by legal entities are commercial credit and financial investments.

The increasing number of members accessing credit in the first two years suggests that evaluation occurs mainly in this short interval.



The relationship with the credit union promotes access to a wider range of financial products, indicating that advice leads members to learn about new and appropriate solutions for their business.

3.6. *Additional Results*

In this last section, we re-analyzed the complete sample with some **sections of interest for comparative purposes.**

In the two excerpts below, we **segregate the branches according to the municipal HDI and the participation of Agribusiness in the municipal GDP, respectively, and present the main results. The cut-off line used was the Brazilian median for each interval.**

Here, the time evolution follows **Membership Time.**

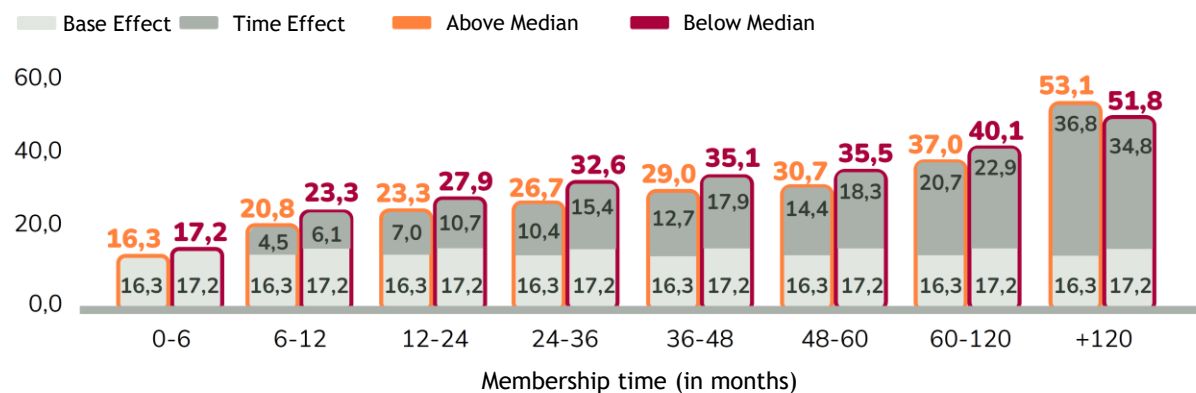
HDI Section

Municipalities segregated according to the Brazilian median of municipal HDI.

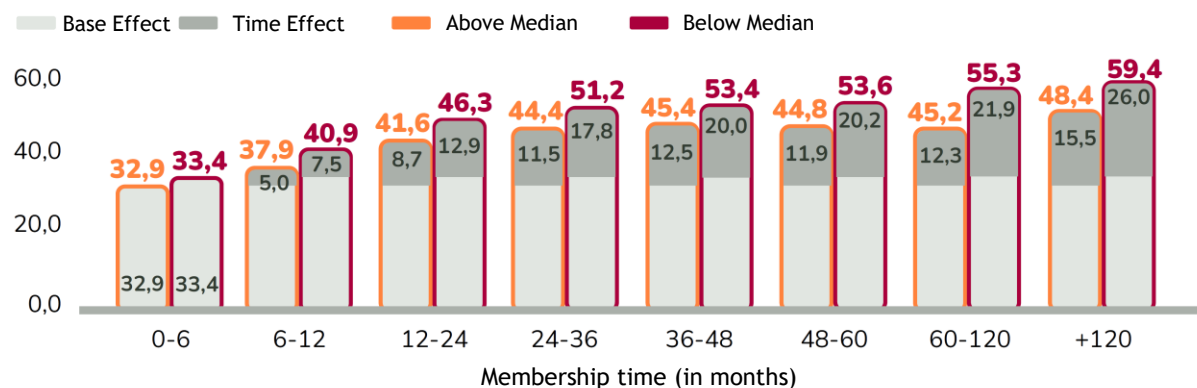
Economic Development Section

Time Deposit and Savings

Term Deposit (in %)



Savings (in %)



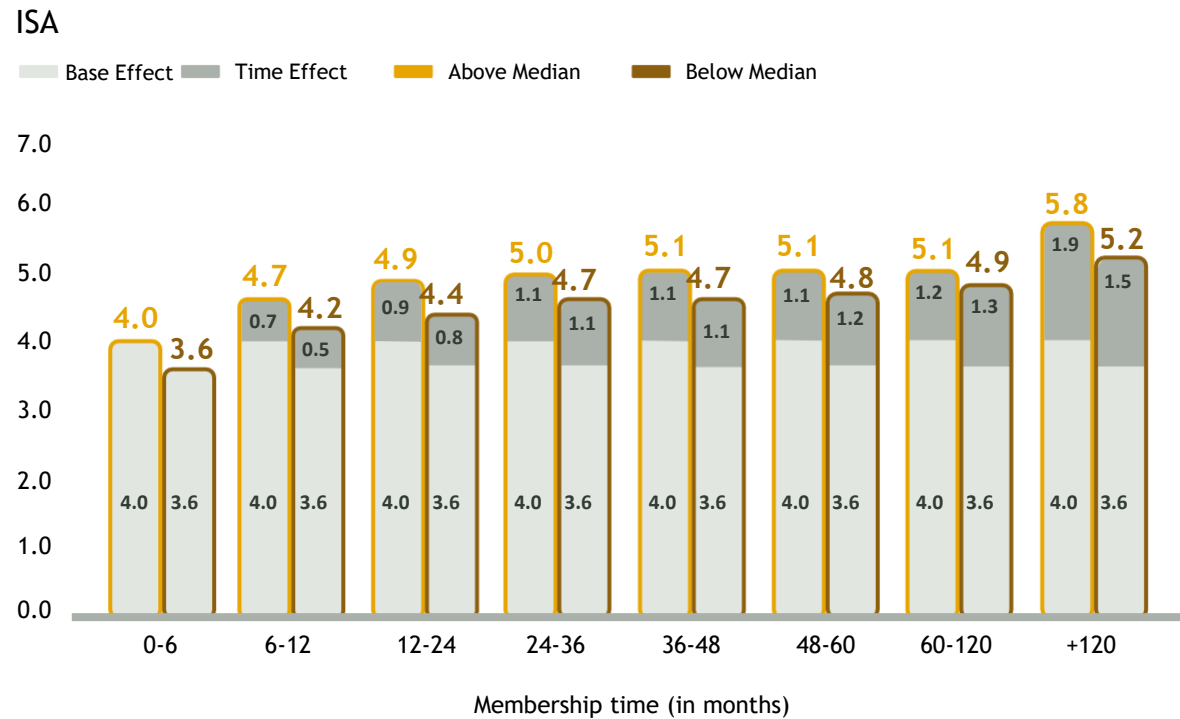
The economic development according to the HDI section brings interesting insights into the dynamics of resource application.

Members residing in municipalities with lower HDI make greater use of Sicredi savings products since the membership. The relationship time effects are also stronger in this audience.

This result seems to indicate greater importance of the physical channel in places with lower HDI, possibly by reducing access barriers and increasing local confidence in the FI.

Agribusiness Section

Agricultural Production Section ISA



When analyzing the participation of Agribusiness in the municipal GDP, it is possible to see a number of distinct behaviors.

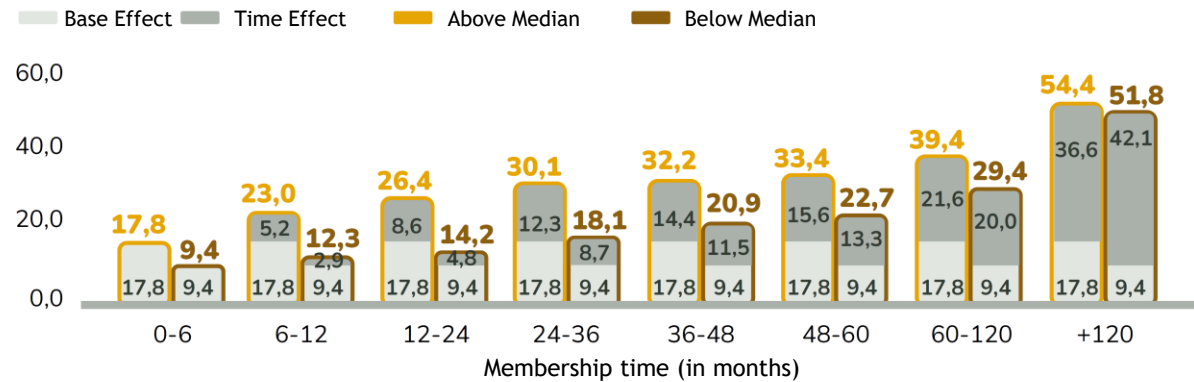
When using solutions, **members from agricultural municipalities tend to look for more products, on average, in the first months of membership.**

However, **the time effect is quite similar** throughout the membership period.

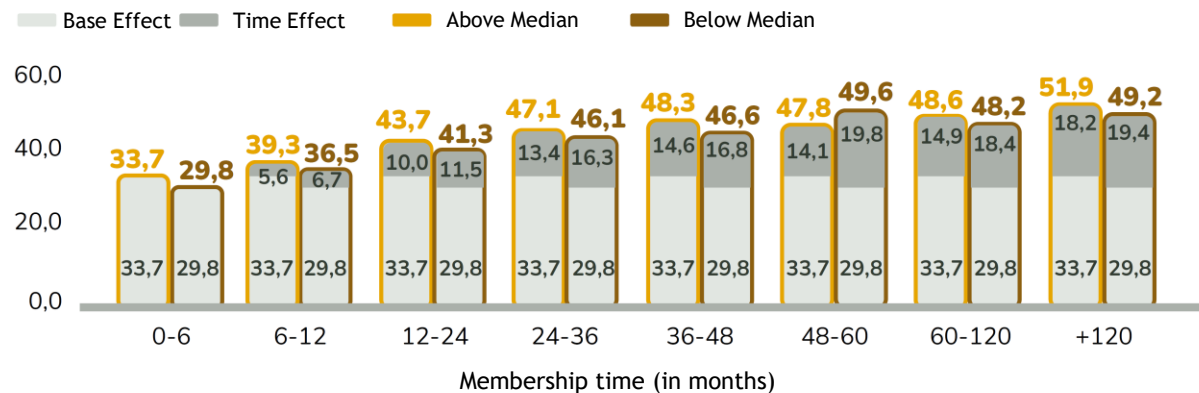
The Solutions per Member Index (ISA) measures how many different services are used by Sicredi members in each period.

Agricultural Production Section Time Deposit and Savings

Term Deposit (in %)



Savings (in %)



In terms of financial investments, a different behavior was observed.

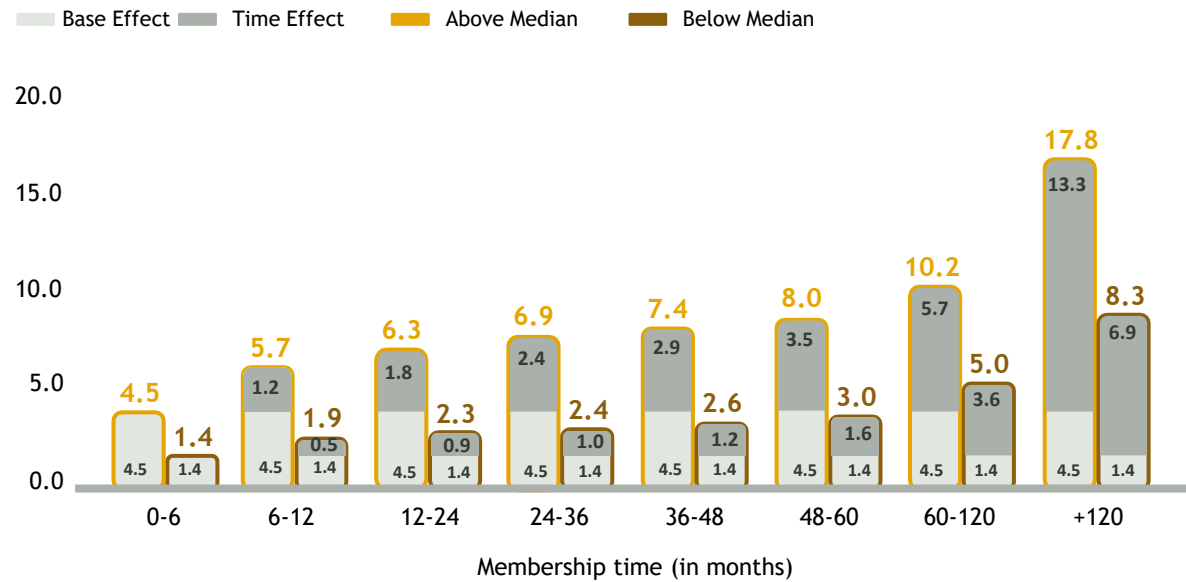
When it comes to the savings account product, there is an initial similarity in adherence between members of the two sections. Over time, adherence is stronger in municipalities with lower agribusiness participation.

On the other hand, members of agricultural municipalities show greater adherence to Time Deposits.

Agricultural Production Section

Rural credit

Rural Credit (in %)



As expected, adherence to the rural credit product is stronger in municipalities with greater agribusiness influence.

However, the time effect is significant in both municipality profiles, indicating that Sicredi is able to promote greater access to rural credit products over the length of the relationship.

The Rural Credit indicator shows the relative number of members that have this product in the analyzed period.

Key Results



The physical channel seems to be more important for low HDI municipalities in promoting savings. Members of these municipalities are more likely to have Savings Accounts or Time Deposits, in addition to increasing membership more intensely with time.



Agricultural municipalities tend to be associated with greater use of services, however the proximity effect is similar. In financial investments, we see a greater propensity for Term Deposits in agricultural municipalities, while others adhere more to Savings Accounts.



We note that there is a strong time effect of Sicredi in promoting agricultural credit, which occurs even in municipalities where the sector has little economic relevance. The result indicates that the institution is able to bring new financing solutions suited to local needs.

4. *Conclusions*

Throughout this report, we seek to bring the main conclusions of the work **Economic Benefits of Credit Unions: The Effectiveness of Cooperativism** (Assunção and Mallman, 2022).

The body of evidence found by the researchers points out that **the presence of a financial branch remains critical for complete financial inclusion*** of the population, even in a strong digitization scenario.

The analysis of the behavior of **members in municipalities whose only service unit belongs to Sicredi shows significant increases in product usage, in addition to the promotion of investment and credit products.**

When observing the behavior of these members in the NFS, relevant characteristics were present.

The first is that **membership time is a relevant factor for accessing larger volumes of credit.** More surprising was the **credit analysis by modality, which shows that our group of members now have access to more non-payroll personal credit**, that is, credit without guarantees.

The result, which had already been evidenced on the supply side in Fipe (2019), indicates that credit unions **not only expand access, but also do so while promoting inclusively.** Audiences without formal income or guarantees are the ones who find it most difficult to access credit in the country.

*It is a situation in which all adults have effective access to the following financial services provided by formal institutions: credit, savings, payments, insurance, pensions and investments.

The analysis of the subsample of members who were previously engaged with the institution and now have a branch in their municipality offers interesting reflections.

Data shows that, even if they already had access via digital channels, the physical channel is important for expanding the use of products.

Effects of non-financial products offered by Sicredi are also presented in this section. In addition to the **increase in members with financial investments, we see in this subgroup a sharp drop in members who use overdraft limits.** This pattern may be a reflection of the promotion of financial education and the greater assistance made possible by a closer relationship.

*Source: Crescimento das Cooperativas de Crédito, Relatório de Economia Bancária, BCB 2021.

The case of **legal entities makes the importance of the physical channel more evident.** Previous studies (FIPE, 2019 and BCB, 2021*) already demonstrated the **importance of credit unions in granting credit to municipalities and smaller companies** – a group that has greater difficulty in accessing bank credit. The results of this study show that **the main demand of legal entities has been commercial credit and investment products.**

When it comes to credit behavior, it is possible to notice a **strong expansion in the relative number of members with access to commercial credit in the first two years,** a period followed by relative stability.

This result indicates that **Proximity manages to speed up the credit risk assessment process, which leads to the offering of suitable solutions in a short period of time.**

Additionally, the branches allow the credit union to offer more suitable credit to smaller companies, which recurrently are not able to provide guarantees.

A final result obtained in **analyzing legal entities is the importance of physical channels in accessing more complex financial products**. While membership time has little impact on popular and widespread products such as card machines, we see **a growing interest in more sophisticated products over the years of membership**.

This behavior suggests that **the physical channel allows a mutual exchange between the FI and members in an advisory process, where new value generation solutions are found**.

Finally, in the additional results section we include relevant sections.

In the HDI section, we see a **greater relative importance of the physical channel in promoting the savings product in less developed municipalities**.

In the municipalities with the presence of **agribusiness, we see two strong results: greater use of services in agricultural municipalities since the membership** (although the time effect shows no distinction), and a **strong time effect on adherence to time deposits**, suggesting an attractive offer by the credit union.

This set of results corroborates our belief in the **importance of proximity and expands our understanding of its impacts on cooperative members**.

In this report, we saw that after 5 years of engagement:

- Our members **use 32.4% more products** in relation to the moment they become members;
 - That grow is **41% considering only legal entities**.
- The percentage of members with **savings accounts rises 46%**, and **time deposits rise 169%**;
 - With legal entities, the advance is **116% for savings** and **163% for time deposits**.
- The relative amount of **members with rural credit grows 393%**.
- **Commercial credit rises 177%**, reaching 50% of member legal entities.
- In terms of credit throughout the NFS, the **average credit volume grows 27.5%**.
 - When it comes to **personal loan without payroll deduction**, members have **on average 46% more resources**.
- Former members who **now have a branch in their municipality use 61% more products** after 5 years of the branch opening.
 - The use of **Savings Accounts by this group advanced 59%**, and **time deposits 49%**.
 - The percentage of members using **overdraft limit credit is reduced by 47%**.

The evidence presented herein highlights the importance of proximity in promoting more suitable and less restrictive credit, allowed by the reduction of informational asymmetry, and the offering of a wider and more suitable range of products for different audiences, under the advising of an account manager.

*Therefore, the physical channel **enables complete access to financial** inclusion, going beyond the needs of moving funds by promoting the use of a wide range of NFS products and benefits.*



