

# **Financial Inclusion Report**

October 2023



BANCO CENTRAL  
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# Financial Inclusion

## Report

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### **About inclusive language in the Spanish version of this report**

The Central Bank of Argentina is committed to encouraging the use of a non-discriminatory language that promotes the acceptance of all gender identities. It should be noted that all those who have contributed to this report acknowledge that language influences ideas, feelings, ways of thinking, as well as principles and core values.

Therefore, efforts have been made to avoid sexist and binary language in this report.

## Foreword

The Charter of the Central Bank of Argentina (BCRA) establishes that *“the purpose of the Bank is to promote—within the framework of its powers and the policies set by the National Government— (...) economic development with social equality.”* It states that the Board is responsible for the following duties, among others: (i) authorizing the opening of branches and other types of offices with a view to expanding the geographical reach of the system; serving the needs of the least developed areas; and promoting widespread access to financial services by users; (ii) regulating the lending policy and steering it through differential minimum reserve requirements or any other appropriate means; (iii) setting differentiated policies aimed at small- and medium-sized enterprises and regional economies; and (iv) carrying out research work and promoting financial education and activities related to its purpose as set out in its Charter. These objectives and competences are included in the concept of financial inclusion.

Financial inclusion stands for the principle that all individuals can have access to and use first-rate financial services provided in a sustainable and responsible manner. The BCRA has adopted a policy to achieve greater financial inclusion by expanding and democratizing financial services so that all the segments of the population may contribute to, and benefit from, economic growth.

The notion of “financial health” refers to the extent to which individuals, households, companies and communities can easily handle their current financial affairs and feel confident about their financial state in the future. The BCRA fosters the development of financial capability and habits that improve money management and decision making. Thus, the BCRA contributes towards a more inclusive and fairer society with better development opportunities for all productive units and individuals, especially for the most vulnerable sectors.

For the purpose of assessing financial inclusion, the BCRA monitors certain variables. These metrics are disaggregated by gender, age and location. This enables the BCRA to assess the progress and condition of financial inclusion before making policy decisions. The outcome and the measures adopted in this regard are released every six months in the Financial Inclusion Report (IIF). This report analyzes, for the first time, the financial inclusion of the young population, as well as the indicators of bank and payment account activity, and of legal persons’ (LPs’) deposit accounts. Also, the section on credit to productive units provides a description of borrowings under the Credit Line for Productive Investment (LFIP).

The next issue of the IIF will be published in April 2024.

Autonomous City of Buenos Aires, October 30, 2023.

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## Executive Summary

- **Financial access points (PDAs) increased 1.2% in the first half of 2023** | The number of PDAs every 10,000 adults (15 every 10,000 adults) and PDA coverage—in terms of the percentage of municipalities (52.3%) and the adult population (92.5%)—did not change significantly.
- **The number of people with accounts amounted to 35.7 million as of June 2023, virtually reaching full coverage of the adult population** | The number of people holding both bank accounts and payment accounts climbed from 18.3 million in December 2022 to 20.1 million in June 2023, that is, more than 55% of the adult population. This might point to the fact that people are taking advantage of a range of interoperable financial services.
- **The number of people making transactions in any of their accounts was 21.9 million in the second quarter of 2023** | Thus, 61.4% of people with an account made at least one credit or debit transaction. The population aged 20-44 showed the highest activity levels (over 70%), with a maximum level in the 25-29 age group.
- **The number of companies and organizations (C&O) with accounts reached 500,000** | 13,000 more C&O held accounts compared to December 2022; those operating only through bank accounts had the greatest share (80%), followed by those that had both types of accounts (19%), and finally those holding payment accounts only (1%).
- **The use of electronic means of payment (MPEs) kept on expanding in the first half of 2023** | Each adult made, on average, 25 monthly payments through electronic means, reaching a historic high. Moreover, the transacted amount per adult rose by 25% at constant prices against the first half of 2022.
- **The number of time deposits (TDs) in pesos made by natural persons (NPs) stood at 8.2 every 100 bank accounts, reaching a 4-year high** | This metric grew 45% between June 2022 and June 2023. This growth is also reflected in a higher share of TDs in pesos in the total stock of savings and investment products, going up from 37% in June 2022 to 43% in June 2023.
- **The adult population with a credit product in the broad financial system (BFS) increased 0.9 percentage points (p.p.) compared to December 2022, reaching a share of 55.4% as of June 2023** | This way, the number of people joining the BFS with a credit product continued on the rise, thus consolidating the upward trend, though the average balance per debtor fell. Other non-financial credit providers (OPNFCs) are the key drivers of this performance, as they grant personal loans digitally for low amounts.
- **The number of micro-, small- and medium-sized enterprises (MSMEs) with a credit product in the BFS kept on growing in the first half of 2023** | One million MSMEs had a credit product in the BFS as of June 2023, with a net increase of nearly 57,000 productive units compared to June 2022. Moreover, the MSMEs' stock of financing in the BFS recorded a 5.1% year-on-year (y.o.y.) fall at constant prices. The support provided through the BCRA's LFIP—which accounted for 28.5% of the total stock of financing to MSMEs—continued having a positive impact in terms of financial inclusion focused on the productive development of MSMEs.

# Table of Indicators | Financial inclusion in Argentina

Indicator		Latest data	2019	2020	2021	2022	2023
Infrastructure	PDA's	Jun-23 (1)	30.696	44.415	50.258	52.668	53.279
	PDA's every 10,000 adults	Jun-23 (1)	9,0	12,9	14,4	14,9	15,0
	Percentage of municipalities with at least one PDA	Jun-23 (1)	41,9	48,3	52,3	52,2	52,3
	Percentage of the adult population in municipalities with at least one PDA	Jun-23 (1)	91,3	92,2	92,5	92,5	92,5
Accounts	Percentage of the adult population with account	Jun-23	82,7	92,8	95,2	99,2	(*)
	Percentage of the adult population with bank account	Jun-23	81,5	90,7	91,3	95,3	95,9
	Percentage of the adult population with bank account (women)	Jun-23	85,2	90,9	91,7	95,7	96,4
	Percentage of the adult population with bank account (men)	Jun-23	77,6	90,5	90,7	94,8	95,4
	Percentage of the adult population with payment account	Jun-23	6,8	24,2	46,6	55,8	61,1
	Percentage of the adult population with payment account (women)	Jun-23	5,3	23,2	47,3	56,3	61,6
	Percentage of the adult population with payment account (men)	Jun-23	8,4	25,2	45,9	55,4	60,5
Payments and withdrawals	Number of payments on cards per adult	Jun-23 (2)	5,4	5,5	7,2	8,2	9,2
	Number of electronic transfers per adult	Jun-23 (2)	0,4	1,1	2,4	5,4	8,9
	Number of payments by transfer per adult	Jun-23 (2)	0,3	0,7	1,6	3,5	5,6
	Number of payments through electronic means per adult	Jun-23 (2)	6,3	7,6	11,5	17,8	24,7
	Number of cash withdrawals through ATMs per adult	Jun-23 (2)	2,9	2,7	2,7	2,7	2,5
Savings	Number of time deposits every 100 account holders (ARS/UVA/USD)	Jun-23	11,1	10,6	11,2	17,5	21,1
Credit	Percentage of adults with financing from FIs	Jun-23	37,0	35,4	35,2	37,1	37,5
	Percentage of women with financing from FIs	Jun-23	35,3	33,6	33,4	35,8	36,2
	Percentage of men with financing from FIs	Jun-23	38,8	37,3	37,0	38,4	38,8
	Percentage of adults with financing in the BFS	Jun-23	48,6	47,2	50,3	54,5	55,4
	Percentage of women with financing in the BFS	Jun-23	45,6	44,4	48,3	53,0	54,0
	Percentage of men with financing in the BFS	Jun-23	51,6	49,9	52,4	55,8	56,6
	Percentage of MSMEs with financing in the BFS (millions)	Jun-23	0,58	0,81	0,81	1,03	1,00

Note:

ATMs: automated teller machines, FIs: financial institutions, BFS: broad financial system.

(1) Including FIs' PDA's (branches, mobile branches, ATMs, self-service terminals (TASs) and supplementary agencies of financial services (ACSFs)) and non-FIs' ATMs.

(2) Monthly average for each year. 2023: monthly average for the first half.

(\*) At the time of publication of this edition, the data by age group of the 2022 National Census of Population, Households and Housing (CNPV) carried out by the National Institute of Statistics and Censuses of Argentina (INDEC) are not available. For that reason, projections of the 2010 CNPV are used. The indicators used in this IIF regarding the adult population are provisional until information from the latest census is released. In this sense, the percentage of the adult population who had at least one account in June 2023 has a value of 100.4%.

# Introduction

The most relevant indicators of financial inclusion in Argentina exhibited a favorable performance in the first half of 2023. This occurs against a backdrop of increasing use of digital financial services at an international level, which underscores the importance of having communication and information technology infrastructure in place. Locally, financial institutions (Fis) and non-financial institutions<sup>1</sup> have been adapting the services they offer to leverage on technology. The BCRA regulated digital financial services seeking to balance the benefits offered to users and to mitigate the risks they entail.

This is evidenced, for example, in the growth of joint holding of bank and payment accounts, which was over 55% of the adult population as of June 2023. This indicator reveals the importance of interoperability of both types of accounts, which allows the population to access a range of financial products, such as means of payment, and savings, investment and finance instruments. In this sense, the first measures of account activity (i.e., debits and/or credits) point to a rise in the share of people with account movements.

In the same vein, payments through electronic means have been posting a sustained and high growth, with the number of transactions per adult reaching a record high in the first half of 2023. This, along with the downward trend in the average amount transacted per adult,<sup>2</sup> evidences the penetration of MPEs in everyday transactions for low amounts.

The development of digital infrastructure helped FIs to incorporate financial services into digital channels. Mobile internet connection kept on expanding at a rate well above (6% annually in the first half) the population growth rate (0.9%), whereas fixed internet connection continued rising, though at a more moderate pace (1.4% annually in the first half).<sup>3</sup>

Moreover, access to digital infrastructure still poses challenges, such as those related to the quality and availability of internet connection in small municipalities, and to the availability of electronic devices.<sup>4</sup> In turn, physical infrastructure for access to financial services, which is globally on the decline in the cases of branches and ATMs, remained relatively unchanged in the first half of 2023.

On another note, the domestic macroeconomic context presented variable activity, consumption and employment levels between the first and second quarters of 2023. These indicators have a

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<sup>1</sup> They include payment service providers (PSPs) and non-financial credit providers (PNFCs).

<sup>2</sup> Average amount at constant prices of June 2023. The amount transacted per adult, at constant prices, went up 25% y.o.y. in the first half of the year.

<sup>3</sup> Rates based on the report [Internet Connections](#) (INDEC).

<sup>4</sup> Small municipalities show a larger share of slow connections (1 to 10 Mbps) (see Chart 3). In turn, 62.6% of households and 89.3% of individuals owned computers and cell phones, respectively.

direct or indirect impact on financial inclusion for natural persons (NPs) and companies. Economic activity grew in the first quarter of the year (0.9%) and shrank in the second quarter (-2.8%).<sup>5</sup> The demand for consumer goods was qualitatively similar to the gross domestic product (GDP).

As for the labor market, job creation continued in the first three months of the year, but some jobs were lost in the second quarter.<sup>6</sup> A noteworthy characteristic of employment in the past few years is that it increased relative to GDP.<sup>7</sup> Employment growth thus paves the way for greater financial inclusion. In this regard, 35.7 million NPs held accounts as of June 2023, virtually reaching full coverage of the adult population, and the number of NPs with a credit product continued expanding (19.7 million).

In turn, labor income continued showing a heterogeneous performance. The income of registered employees was relatively stable in the first half of 2023 compared to the end of 2022, whereas the income of non-registered people decreased.<sup>8</sup>

Lending and deposit rates were stable in the first quarter to increase in the second. The BCRA speeded up a rise in the benchmark interest rate so that investors may obtain positive real returns in domestic currency and financial volatility may not have an adverse effect on inflation expectations and the forex market dynamic.<sup>9</sup>

Against this backdrop, new NPs and MSMEs had access to a credit product, but the average balance per debtor continued on the decline. Particularly, the BCRA issued regulations aimed at achieving greater financial inclusion for MSMEs, which proved to have a positive impact on the number of MSMEs that borrowed in the BFS.

As regards savings and investment products, NPs' portfolio change continued to intensify, with a reduction in holdings of immediate liquidity instruments and an increase in longer-term and higher-return instruments.

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<sup>5</sup> Percent changes correspond to the [seasonally-adjusted global supply and demand series](#) (INDEC).

<sup>6</sup> According to the Permanent Household Survey (EPH), around 13.2 million people were employed in the first quarter of 2023 against 13.1 million in the fourth quarter of 2022. In the second quarter of 2023, employment dropped to 13.1 million (EPH, INDEC).

<sup>7</sup> The indicator in question is the ratio of the number of employed people (EPH, INDEC) to the seasonally-adjusted GDP (INDEC). Between 2019 and the first half of 2023, the employment/GDP ratio grew at an annual rate of 2%.

<sup>8</sup> The [salary index](#) (INDEC) was used, and series were deflated by the consumer price index (CPI) (INDEC). The wage of registered employees rose 0.3% on average in the first half of 2023 against the second half of 2022. In turn, the wage of non-registered, private-sector employees fell 6.6%. On an aggregated basis, the salary index decreased less than 1%.

<sup>9</sup> See [Monetary Policy Report, July 2023](#) (BCRA).



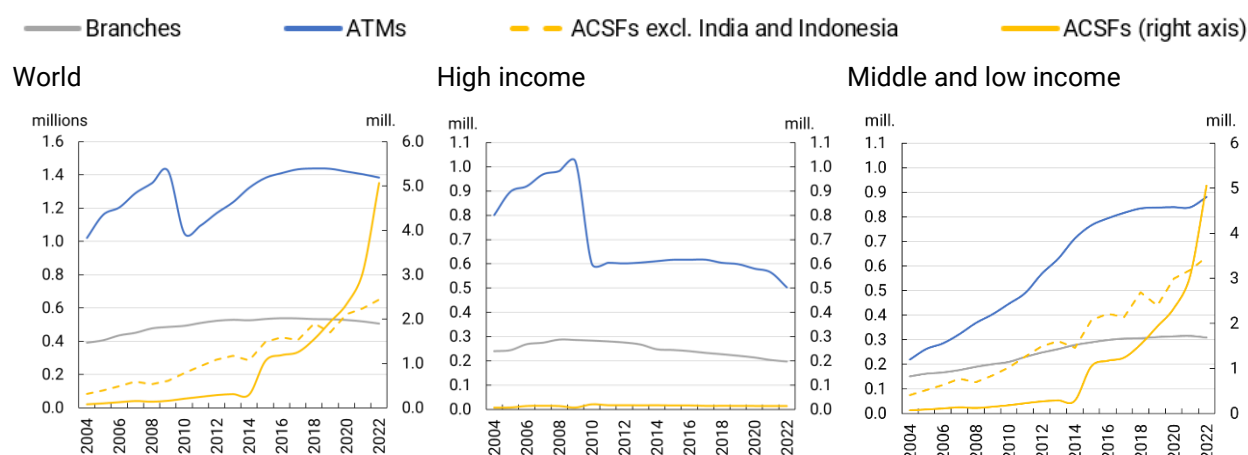
# 1. Financial Infrastructure

The advance of digitalization of financial services, broader availability of mobile devices and internet, and the goal of cost cutting from financial institutions, among other factors, have prompted changes in the growth and composition of PDAs at a global level.<sup>10</sup>

Branches and ATMs followed a downward trend worldwide, whereas non-traditional schemes, such as ACSFs, grew significantly, mostly on account of India and Indonesia. In the past five years, this has led to a significant change in the composition of PDAs, where the share of ATMs and branches taken together slid down from 61% in 2017 to 27% in 2022.<sup>11</sup> However, it decreased from 83% to 74% in the same period if India and Indonesia are excluded.

However, PDAs' performance in the period varied depending on the country's income level: (i) high-income countries reduced the number of ATMs and branches, while keeping the number of ACSFs very low; (ii) middle- and low-income countries showed a significant increase in the number of ACSFs and ATMs, and the number of branches remained relatively stable.

**Chart 1 | Number of PDAs by type and group of countries**



Note | Based on a sample of 85 countries reporting financial infrastructure data to the IMF. "mill": millions.

Source | Financial Access Survey, IMF.

The development of PDAs in Argentina is similar to that of middle- and low-income countries, in a context where MPEs significantly grew in terms of both number of transactions and amount.

**Physical infrastructure.** In the first half of 2023, PDAs in Argentina increased 1.2%, mostly driven by new electronic devices. The number of PDAs every 10,000 adults and PDA coverage did not exhibit significant changes both in the percentage of municipalities or that of the adult population.

<sup>10</sup> [Financial Access Survey, 2022 Trends and Developments.](#)

<sup>11</sup> These figures have been calculated on the basis of a sample of 85 countries reporting financial infrastructure data to the International Monetary Fund (IMF).

In line with the global trend,<sup>12</sup> branches continued on the decrease, dropping 1.2% in the first half of 2023. This fall was mainly due to the performance of private banks. ACSFs remained virtually stable, slightly rising 0.1%. This kind of PDAs are mostly found in non-bank collection networks,<sup>13</sup> and may have reached a ceiling, as they cover almost all of those outlets.

**Table 1 | PDAs by municipality**

Number of adults per municipality	Number of PDAs			Number of PDAs every 10,000 adults			% municipalities with at least one PDA			% adults living in municipalities with PDA		
	Dec-21	Dec-22	Jun-23	Dec-21	Dec-22	Jun-23	Dec-21	Dec-22	Jun-23	Dec-21	Dec-22	Jun-23
More than 500 K	5,527	5,898	6,006	11.7	12.4	12.5	100%	100%	100%	100%	100%	100%
From 500 K to 250 K	7,533	8,312	8,545	10.9	11.9	12.2	100%	100%	100%	100%	100%	100%
From 250 K to 100 K	14,889	15,190	15,165	19.0	19.2	19.1	100%	100%	100%	100%	100%	100%
From 100 K to 50 K	5,519	6,078	6,124	16.3	17.4	17.5	100%	100%	100%	100%	100%	100%
From 50 K to 10 K	8,855	9,203	9,354	14.3	14.5	14.7	99.2%	99.3%	99.3%	86.6%	86.5%	86.3%
From 10 K to 5 K	3,061	3,096	3,163	14.4	14.6	14.8	99.1%	98.7%	98.7%	74.6%	73.9%	74.1%
From 5 K to 2 K	2,666	2,724	2,745	15.3	15.8	16.1	95.6%	95.5%	95.8%	71.9%	71.8%	72.3%
Less than 2 K	2,208	2,167	2,177	15.0	14.7	14.7	34.0%	33.8%	33.9%	52.1%	51.6%	51.6%
<b>National total</b>	<b>50,258</b>	<b>52,668</b>	<b>53,279</b>	<b>14.4</b>	<b>14.9</b>	<b>15.0</b>	<b>52.3%</b>	<b>52.2%</b>	<b>52.3%</b>	<b>92.5%</b>	<b>92.5%</b>	<b>92.5%</b>

Note | K: thousand. Number of municipalities and percentage of the urban population as of June 2023: more than 500 K: (5, 14%); from 500 to 250 K: (19, 20%); from 250 to 100 K: (46, 23%); from 100 to 50 K: (48, 10%); from 50 to 10 K: (268, 18%); from 10 to 5 K: (232, 6%); from 5 to 2 K: (402, 5%); and less than 2 K: (2518, 4%).

Source | BCRA, networks and INDEC.

As for electronic devices, ATMs increased 3.2% against December 2022, reaching 607 new devices, 386 of which were added by public banks and 217 by non-financial institutions. Thirty-one percent (31%) of new ATMs were located inside branches, and 69% outside. ATMs placed outside bank branches help to improve the capillarity of the financial system infrastructure. In addition, these ATMs provide users with more service hours and the chance to withdraw cash at gas stations and non-bank collection outlets, for example. Fifty-three new TASSs, in turn, were made available to the public, mostly in private banks and located inside branches. This represented a 0.6% increase.

As for coverage, the percentage of municipalities with at least one PDA has remained virtually constant from December 2021, as well as the percentage of adults living in municipalities with at least one PDA. However, a marginal increase was observed in municipalities with less than 10,000 adult inhabitants in the past six-month period. Regarding municipalities with more than 10,000 adults, 99.5% had at least one PDA, and 96.4% offered a full range of financial services (i.e., they had at least one branch).

<sup>12</sup> See [IIF, second half of 2022](#), Chart 1.

<sup>13</sup> As of June 2023, 99.6% of ACSFs were outlets of non-bank collection networks.

**Table 2 | PDA combination**

PDA combination	Percentage of municipalities						Percentage of adults					
	More than 100 K	From 100 to 50 K	From 50 to 10 K	From 10 to 5 K	From 5 to 2 K	Less than 2 K	More than 100 K	From 100 to 50 K	From 50 to 10 K	From 10 to 5 K	From 5 to 2 K	Less than 2 K
ACSF + BRNCH + ATM + TAS	100.0	97.9	81.0	47.8	25.1	1.9	100.0	97.7	85.0	48.7	28.2	5.6
BRNCH + ATM + TAS	-	-	0.4	-	0.5	0.3	-	-	0.9	-	0.4	0.6
ACSF + BRNCH + ATM	-	-	13.8	35.3	35.1	4.2	-	-	10.1	35.1	34.6	11.7
ACSF + BRNCH + TAS	-	-	-	-	-	0.1	-	-	-	-	-	0.2
BRNCH + ATM	-	-	-	-	1.2	1.3	-	-	-	-	1.1	2.6
<b>(1) Full services</b>	<b>100.0</b>	<b>97.9</b>	<b>95.1</b>	<b>83.2</b>	<b>61.9</b>	<b>7.9</b>	<b>100.0</b>	<b>97.7</b>	<b>95.9</b>	<b>83.8</b>	<b>64.3</b>	<b>20.6</b>
ACSF + ATM + TAS	-	-	-	0.4	0.2	0.1	-	-	-	0.6	0.2	0.2
ACSF + ATM	-	2.1	2.6	12.5	23.4	6.2	-	2.3	2.1	12.0	23.0	12.3
<b>(2) In-person serv. and electr. dev.</b>	<b>-</b>	<b>2.1</b>	<b>2.6</b>	<b>12.9</b>	<b>23.6</b>	<b>6.3</b>	<b>-</b>	<b>2.3</b>	<b>2.1</b>	<b>12.7</b>	<b>23.2</b>	<b>12.5</b>
Only ACSFs	-	-	0.7	1.7	6.2	9.1	-	-	0.6	1.5	5.3	13.6
Only ATMs	-	-	0.7	0.9	3.0	9.8	-	-	0.7	0.8	2.5	13.0
<b>(3) One type of PDA only</b>	<b>-</b>	<b>-</b>	<b>1.5</b>	<b>2.6</b>	<b>9.2</b>	<b>18.9</b>	<b>-</b>	<b>-</b>	<b>1.3</b>	<b>2.3</b>	<b>7.9</b>	<b>26.6</b>
<b>(4) Other combinations</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.0</b>	<b>0.6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.0</b>	<b>0.6</b>
<b>(5) With PDA</b>	<b>100.0</b>	<b>100.0</b>	<b>99.3</b>	<b>98.7</b>	<b>95.8</b>	<b>33.7</b>	<b>100.0</b>	<b>100.0</b>	<b>99.3</b>	<b>98.7</b>	<b>96.3</b>	<b>60.4</b>
<b>(6) With no PDA</b>	<b>-</b>	<b>-</b>	<b>0.7</b>	<b>1.3</b>	<b>4.2</b>	<b>66.3</b>	<b>-</b>	<b>-</b>	<b>0.7</b>	<b>1.3</b>	<b>3.7</b>	<b>39.6</b>

Note | K: thousand; BRNCH: branch. Note | The percentage of adults with no PDAs encompasses those living in municipalities with no PDA coverage and scattered rural population.

Source | BCRA, networks and INDEC.

However, the number and variety of PDAs decline as population decreases. In smaller municipalities the presence of only one PDA type—an ATM or an ACSF—is more frequent, which means that their inhabitants have to travel to bigger municipalities to access the full range of in-person financial services. The main challenge is thus to reach out to remote and less-populated municipalities, where digital infrastructure is even more important to ensure access to, and use of, digital financial services. In addition, the availability of point-of-sale (POS) terminals for making digital payments and cash withdrawals at stores is key for financial inclusion (see Electronic Means of Payment).

### Box 1 / Estimated Use of Physical Infrastructure

To determine the extent to which the population uses the physical infrastructure, the number of three transaction types made at a PDA was compared to the number of those transaction types made through an electronic channel: (i) payment of bills and transfers; (ii) TDs, and (iii) provision of loans.<sup>14</sup>

First, the physical infrastructure shows a minority share in transaction operations and saving transactions, and a majority share in lending transactions. This might be associated with the requirements for taking a loan, whether due to the complexity of the process of digitalization or to applicants' choice to carry out transactions on a face-to-face basis.

Second, in-person channels are being replaced with electronic channels for TDs and provision of loans. This is in line with FIs' greater development of electronic channels for these

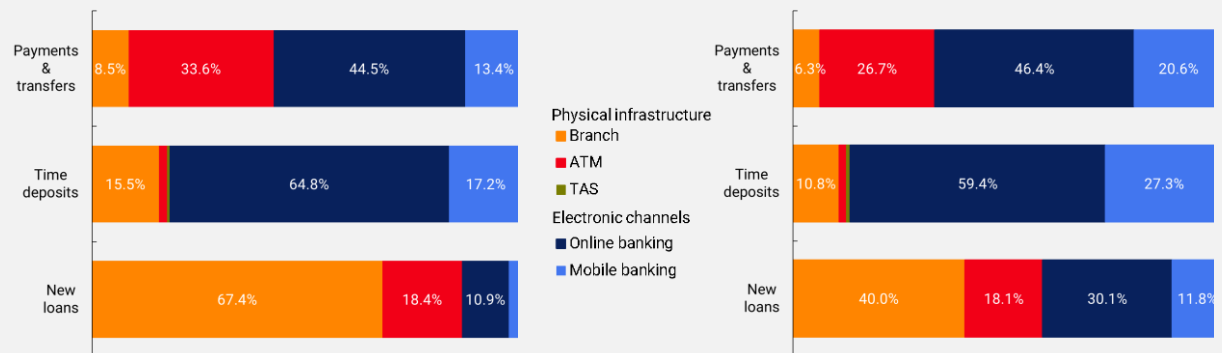
<sup>14</sup> Data reported by FIs to the BCRA. Set (i) is composed of instant transfers, regular (deferred) transfers, transfers of large amounts, and payment of bills and taxes; set (ii) is composed of regular and online TDs; and set (iii) is composed of newly personal, pledge- and mortgage-backed loans granted. The combination of channels and types of transaction may involve different sets of FIs, as not all of the reporting FIs offer all the transactions through the channels analyzed.

transactions. On another note, online banking is more frequently used for all transactions than mobile banking. However, as cell phone ownership and use increases, so does mobile banking use.

**Chart 2 | Share of transactions by PDA type and channel**

March 2021 to August 2021

September 2022 to February 2023



Source | BCRA and networks.

Even in a context of broad digitalization of financial services, physical infrastructure continues to be relevant, especially for even more complex transactions. Moreover, this channel is fundamental for people with limited digital skills or no electronic devices or internet access.

**Digital infrastructure.** The adult population's use of digital financial services continues on the rise.<sup>15</sup> This underscores the importance of digital infrastructure in every aspect—from the ownership of devices to internet connection quality—as it determines the extent and type of use of digital financial services.

First, 62.6% of households owned computers and 89.3% of individuals owned cell phones in Argentina.<sup>16</sup> Argentina ranks higher in ownership of devices than other countries in the region but lower than developed countries, where digital financial services are used extensively (Denmark and Finland).

Second, 92% of households have internet connection, which is key to the use of digital financial services. In addition, connection quality, in terms of speed and stability, plays a key role as it affects access to, and use of, digital financial services. The average of the mean speed of mobile internet (22 Mbps) and fixed internet (60 Mbps) at a national level is sufficient enough to use electronic channels such as online and mobile banking.<sup>17</sup> However, Argentina's performance is not as good when compared to other countries in the region (like Brazil and Uruguay), or developed countries (like Denmark and Finland).

<sup>15</sup> See Account Holding, Electronic Means of Payment and Credit to Natural Persons.

<sup>16</sup> Data as of 2022, International Telecommunication Union (ITU).

<sup>17</sup> As for speed, the minimum recommended by the Federal Communications Commission of the United States, for general browsing and email is 1 Mbps, whereas streaming high-definition video requires a minimum speed between 5 and 8 Mbps. [Broadband Speed Guide](#).

**Table 3 | International comparison of digital infrastructure**

Metric	Argentina	Brazil	Colombia	Paraguay	Uruguay	Denmark	Finland
<b>(1) Access to devices</b>							
Households with computer (%)	62,6	39,4	34,0	29,5	60,4	92,1	87,8
Individuals with cell phone (%)	89,3	88,1	75,8	...	83,3 (2019)	...	98,4 (2018)
Cell phone subscriptions (every 100 people)	132,4	98,9	155,8	127,7	138,5	126,6	128,7
<b>(2) Internet access</b>							
Households with internet access (%)	92,1	80,2	59,5	50,5	91,1	95,2	91,5
<b>(3) Connection quality</b>							
Average mobile internet speed (Mbps)	22,2	33,4	10,8	17,5	33,1	113,4	83,6
Average fixed internet speed (Mbps)	60,3	97,5	89,6	68,2	104,7	188,4	94,4
<b>(4) Use of internet and devices</b>							
Individuals using a computer (%)	39.2 (2022)	34.2 (2021)	44.9 (2018)	21.3 (2020)	57.5 (2019)	92.1 (2018)	...
Individuals using a cell phone (%)	89.3 (2022)	92.2 (2021)	90.9 (2021)	87.9 (2020)	83.3 (2019)	88.5 (2018)	...
Individuals using internet (%)	88,4	80,5	72,8	76,3	89,9	97,9	93,0
Use of mobile internet (%)	82.1 (2023)	79.7 (2023)	68.9 (2023)	...	...	...	...

Note | Where no year is stated, the data correspond to 2022, except for connection quality, which correspond to 2023.

Source | Statista, Datareportal.com, ITU and INDEC.

In addition, internet connection technology and speed vary from one municipality to another along the vast territory of Argentina. Particularly, in small municipalities wireless connection is more common.<sup>18</sup> Moreover, small municipalities' speed of internet connections may suffice for the use of digital financial services. However, it is fairly lower, which could adversely affect the use of electronic channels for financial transactions.

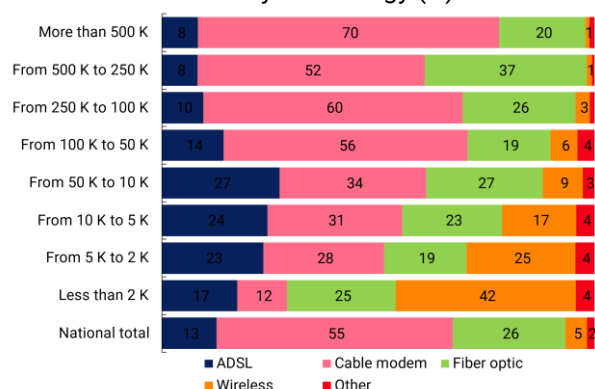
Third, the use of devices and connection have a bearing on the access to, and use of, digital financial services. In this sense, 39% of people in Argentina use a computer. The use of cell phones is more widespread and encompasses 89% of the population. In turn, 88% of individuals use the internet and 82% use mobile internet, above several countries in the region but below developed countries. A more widespread use of cell phones might have a positive impact on the use of mobile banking and digital wallets over online banking from a computer (see Box 3 / Devices and Initiation Channels).

These data reveal that access conditions, quality and use of the digital infrastructure vary across Argentina and are sufficient for the use of digital financial services in larger populations, with increased and better connection and use of technology.

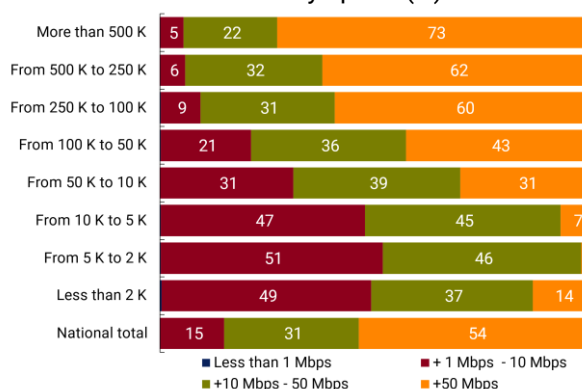
<sup>18</sup> [National Communications Authority \(ENACOM\), Connection Types.](#)

**Chart 3 | Share of connections to fixed internet by technology and speed**

Share of connections by technology (%)



Share of connections by speed (%)



Note | Data as of June 2023. K: thousand.

Source | BCRA, based on data from ENACOM and INDEC.

A key aspect to complete the analysis is the demand for digital financial services, which is closely linked to the population's financial skills. As was stated in previous reports,<sup>19</sup> such demand is higher in more densely populated locations, with higher income and education, among other factors, and is one of the main challenges for policymakers.<sup>20</sup>

On the contrary, in-person financial services continue to be preferred by people with neither digital infrastructure available nor digital skills, and thus such face-to-face services play a key role for them.

<sup>19</sup> See Exhibit 3 / Education, a Key Investment to Safeguard Financial Health, IIF, April 2022, BCRA.

<sup>20</sup> To promote financial inclusion, the BCRA conducts educational programs targeted to different audiences. This helps in the development of skills and financial health, giving priority to the most vulnerable segments.

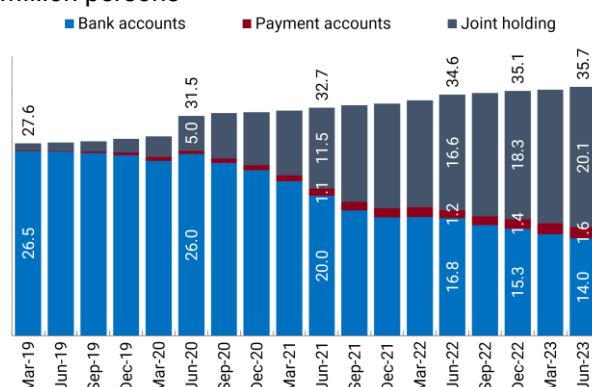
## 2. Account Holding

The number of natural persons (NPs) with at least one account stood at 35.7 million in June 2023. This means that the adult population was nearly fully covered to make payments and transfers, and to save and/or invest.<sup>21</sup> Thus, the number of people holding an account exhibited a net increase of 600 thousand from December 2022, rising 1.7% in six months.

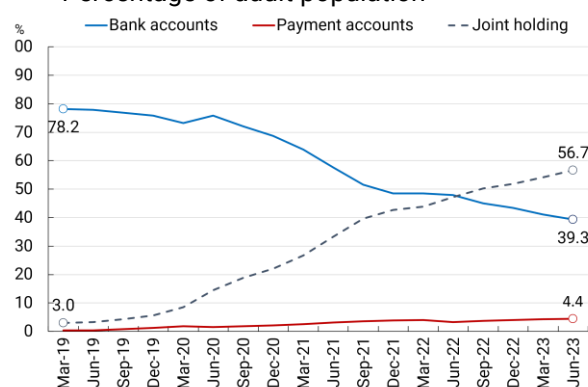
The number of people with bank and payment accounts climbed from 18.3 million in December 2022 to 20.1 million in June 2023. Given that nine out of ten people already had a bank account in December 2022, people who held a bank account only (drop of 1.4 million) might have migrated to the group of people with both types of accounts (rise of 1.8 million). The group of people only holding payment accounts increased by 200 thousand.

**Chart 4 | Natural persons with accounts**

Million persons



Percentage of adult population



Note | Bank accounts: people who only hold this type of account; payment accounts: people who only hold payment accounts; joint holding: people who hold both bank and payment accounts; percentage of the adult population: the denominator comprises the projections of the adult population based on the 2010 national census. Estimated growth rates may differ from actual rates and lead to an overestimation of account holding.

Source | BCRA, based on COELSA and INDEC.

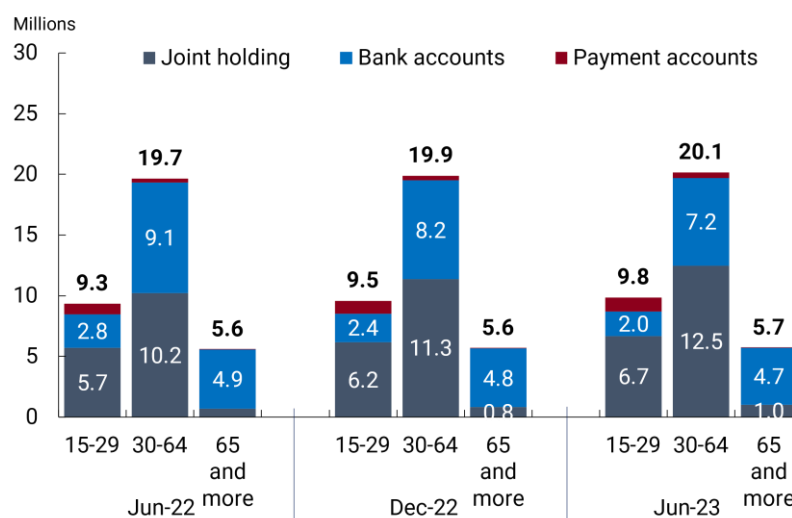
The group of people holding both bank and payment accounts represented slightly above 55% of the adult population in June 2023. Holding both types of accounts provides customers with advantages as they are interoperable, and funds may be transferred for free. This broadens a wider range of transactional services and savings and investment options for NPs according to their needs, enhancing the conditions for financial inclusion in Argentina.

Young people (15-29 years) represented half (300,000) of the 600-thousand increase in the number of people with at least one account, whereas middle-aged people (30-64 years) represented one third (200,000) of the increase. However, the growth in individuals with both account types was mainly due to the middle-aged people, who contributed 63% to the total change rate of 9.8%. However, the young and older adults (65+ years) also exhibited positive

<sup>21</sup>At the time of publication of this edition, the data by age group of the 2022 CNPHV (INDEC) are not available. For that reason, projections of the 2010 CNPHV are used. The indicators used in this IIF regarding the adult population are provisional until information from the latest census is released. In this sense, the percentage of the adult population who had at least one account in June 2023 has a value of 100.4%.

changes in the six-month period, contributing 28% and 9%, respectively.

**Chart 5 | Natural persons with accounts by account type and age group**



Source | BCRA, based on COELSA and INDEC.

It should be noted that young and adult people preferred holding both types of accounts, sharing 68% and 62% when considering the population with at least one account as of June 2023 in each age group. In contrast, older people mostly preferred holding a bank account only: 83% of the population aged 65+ had a bank account only.

People who previously had only bank accounts are increasingly tending to open payment accounts as well. Although nearly the entire adult population (95.9%) had at least one bank account, the number of bank accounts opened continued on the rise,<sup>22</sup> even above payment accounts in the first half of 2023 (4.8 million vs. 4.2 million). The performance referred to above shows that people seek to broaden and supplement their financial services by choosing another type of account (payment account) different from that they already have. This would also mean that individuals are willing to hold new bank accounts that are likely to meet their additional needs. The commercial policy of public and private banks (by way of discounts), the benefits derived from the regulatory framework, an easy digital onboarding process, and no-cost accounts might be some of the factors lying behind this performance.<sup>23</sup>

## **Box 2 / Accounts Held by companies and organizations (C&O)**

Bank or payment accounts allow C&O created as legal persons (LPs) to receive and make payments related to supplies or payroll, and to financially manage their funds. The reasons for C&O to operate with accounts include the following:

- (1) Electronic means of payment (MPEs) are more efficient and safer for collection than cash;

<sup>22</sup> Opening refers to the net opening (or net increase) in the number of (payment or bank) accounts, based on the difference between the number of new accounts and the number of accounts closed.

<sup>23</sup> It should be noted that bank accounts may be opened to collect different types of income.

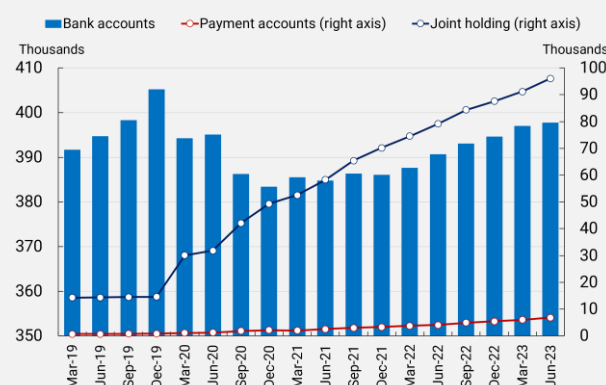


(2) merchants have more incentives to take MPEs as more consumers have these instruments available (likewise, a larger number of consumers will be willing to use MPEs if more merchants take MPEs);<sup>24</sup>

(3) the development of e-commerce is an additional incentive to the need of a bank or payment account, as it is difficult to replace electronic payments with payments in cash in a remote setting.

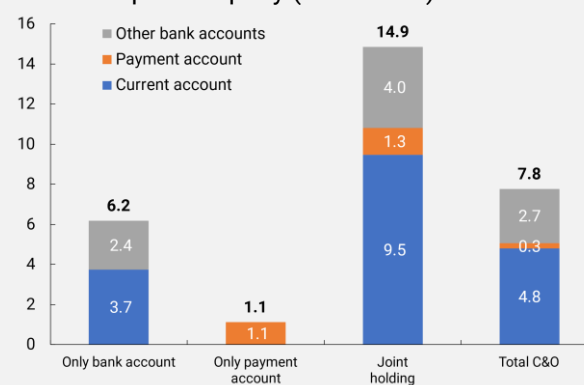
Therefore, the analysis of C&O's accounts is especially important.

**Chart 6 | Companies and organizations with accounts**  
Number of C&O



Source | BCRA, based on COELSA and INDEC.

Accounts per company (June 2023)



In the past few years, the number of C&O with accounts was on the increase, rising from about 407,000 in March 2019 to 500,000 in June 2023.<sup>25</sup> Specific events, such as the COVID-19 pandemic, led to dramatic changes in the opening rate of payment accounts. In particular, C&O with bank and payment accounts rose by around 15,500 in the first quarter of 2020. This figure was partially offset by a drop in the number of C&O that held bank accounts only (-11,000). Upon the onset of the COVID-19 pandemic, C&O that held bank accounts only started to hold a payment account as well, and also both types of accounts were opened in the quarter.

Anyway, at an aggregate level, the share of C&O that have payment accounts (exclusively or not) is still reduced—close to 21% of C&O with accounts. This aspect is in sharp contrast to the figures observed in NPs, in which 61% of the adult population has at least one payment account. This is in line with the BCRA's Report on Retail Payments, which shows that merchants prefer bank accounts to have payments credited.

**Account activity.** The use of accounts for transactions explained the progress made in financial inclusion. The chance of making payments and transfers, saving, investing and borrowing facilitates the financial management of funds, reduces cash reliance and helps to build a credit history. Statistics about the use of accounts were based on data by provided by COELSA. These data

<sup>24</sup> An analysis of two-sided markets or economies of platforms may be found in [Rochet and Tirole \(2004\)](#).

<sup>25</sup> As of June 2023, companies (for-profit entities) accounted for 82%, whereas organizations (not-for-profit entities), 14.5%. It was not possible to determine the corporate form of 3.5% of C&O with accounts.

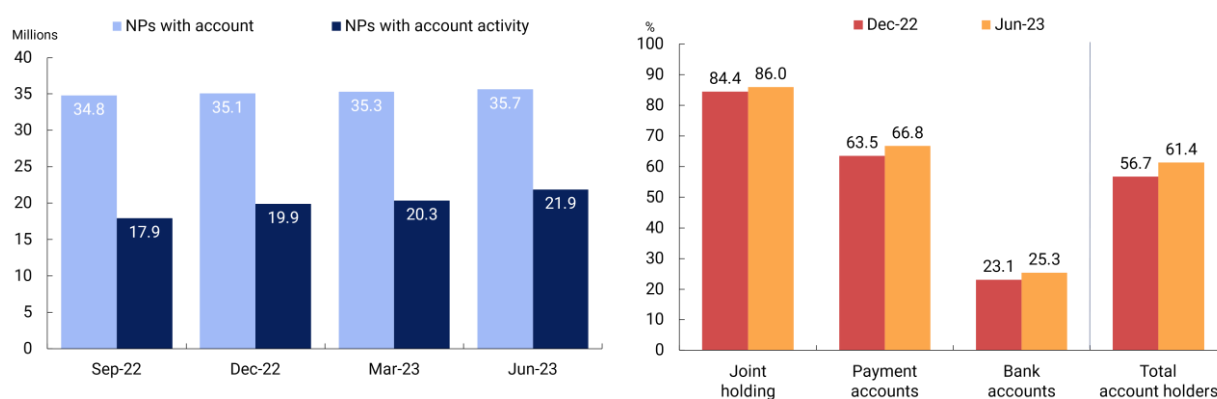
reveal whether account holders had debits or credits recorded in any of their bank and/or payment accounts along a quarter.<sup>26</sup> Activity metrics are underestimated because this indicator takes into account the subset of transactions in which COELSA takes part. Particularly, the indicator does not measure account holders that use a debit card and make no transfer from or to a payment account, among others. In addition, debit transactions are generally initiated by the NP holding the account, whereas credit transactions are initiated by a third party (LP or NP). Such distinction has different connotations in terms of financial inclusion, as debit transactions are active transactions of NPs.

Considering these limitations, 21.9 million NPs had at least one credit or debit transaction<sup>27</sup> in any of their accounts, in the second quarter of 2023, that is, 61.4% of NPs holding accounts as of June 2023. This way, NPs with this type of account activity was up 1.6 million against the previous quarter, which led to a quarterly rise of 7.6%. Account holding sorted out by type of account shows that NPs having both types of accounts had the highest activity ratios, followed by LPs holding payment accounts only, and finally by LPs holding bank accounts only.

## Charter 7 | Natural persons account holders with activity in any of their accounts

In millions

Share



Note | "Accounts" includes bank and payment accounts. "Activity" refers to credit or debit transactions cleared by COELSA.

Source | BCRA, based on COELSA and INDEC.

**\*Age.** The 20-44 age groups exhibited activity levels above 70%, reaching a peak in the 25-29 range. After this peak, activity starts declining from age 30, with figures below 50% from age 60 and below 20% from age 75. The high level of exclusive bank account holding in older people (65+) might be the reason for the low activity ratios by age in this metric, as it excludes debit card transactions (which are used to a larger extent in this group than in the young—aged 22-29).<sup>28</sup> On the other side in terms of age, the youngest population (aged 15-19) recorded activity levels

<sup>26</sup> Transactions settled and cleared by COELSA include debits and credits made by instant transfer, payments by transfer (PCTs), checks, direct debits, instant debits (DEBINs) and bulk transfers (deferred). Instant transfers include those in which a single virtual code (CVU)—identifying a payer or payee account—is involved; in the case of PCTs, those that are interoperable and managed by financial market infrastructures other than COELSA are excluded. Transfers cleared within a financial institution and intra-PSP PCTs are also excluded. Finally, transactions settled by Link and Banelco networks, such as payments on debit cards and transfers between bank accounts (which use a single banking code (CBU)), are also excluded from the indicator. COELSA is estimated to have been involved in 24% of transactions in terms of volume in the first half of 2023.

<sup>27</sup> This metric measures the share of account holders with at least one transaction in any of their accounts along the quarter.

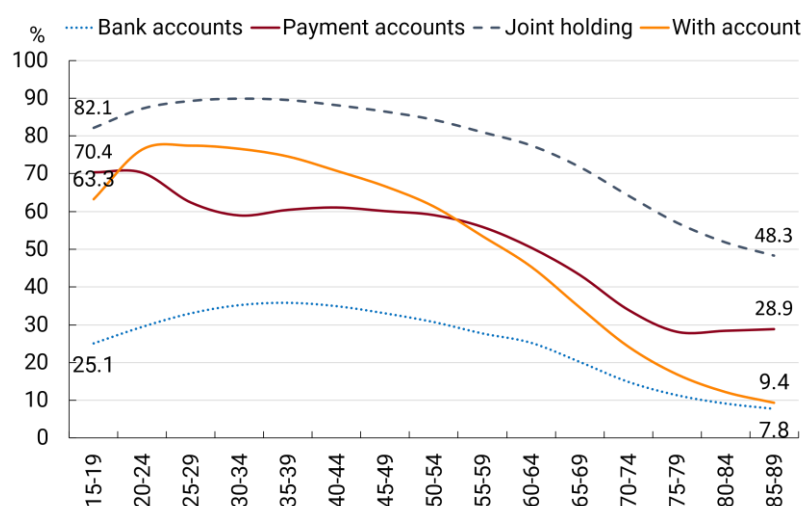
<sup>28</sup> Use of means of payment by age. [First Report on Indebtedness, Genders, and Caregiving in Argentina 2023](#). Working team of the Economic Commission for Latin America and the Caribbean (ECLAC) and the Argentine Ministry of Economy.

equal to 63.3%.

The young use cell phones and the internet more intensively,<sup>29</sup> which would lead to increased account activity.<sup>30</sup> It is worth pointing out that the account holders of financial institutions (FIs) are on average older than the account holders of payment service providers (PSPs). In the latter group of institutions, it is required to install an app on the cell phone to open an account and make transactions. This aspect boosts young people's payment account holding.

**Chart 8 | Ratio of activity to the number of account holders per age group**

Data as of the second quarter of 2023



Note | The x-axis shows 5-year age ranges; bank accounts: bank accounts only; payment accounts: payment accounts only; joint holding: bank and payment accounts. With account: people holding bank and/or payment account. This ratio measures the percentage of people with activity within each age group and type of account holding.

Source | BCRA, based on COELSA and INDEC.

**\*Type of movement.** Eighty-six percent (86%) of people that had both types of accounts recorded at least one transaction, while those holding bank accounts only exhibited a 25% activity rate. This is not exclusive of any age group in particular; it remains at low levels even among the young. Such a figure represents a floor, as transfers between bank accounts and debit card payments—which could be frequent among holders of bank accounts only—are excluded.

As of the second quarter of 2023, 71.6% of the population with both kinds of accounts reported debit and credit transactions. These people mostly use these accounts on an extensive basis, taking advantage of every type of account thanks to the interoperability between the financial system and PSPs. Over 60% of the young and middle-aged people held both types of accounts,

<sup>29</sup> Younger generations (aged 18-29) are the group which record the highest usage of the internet (96.7%) and cell phones (97.8%). Among middle-aged people (30-64), the rate of usage is 93% and 97.2%, respectively. In turn, people aged 65 and more record the lowest rates (63.6% and 78.1%). [INDEC, Access and Use of Information and Communication Technologies, EPH, fourth quarter of 2022.](#)

<sup>30</sup> See [First Report on indebtedness, Genders, and Caregiving in Argentina. ECLAC.](#)

87% of which recorded activity in the quarter under analysis.

**Table 4 | NPs with account movements by account type**

Data as of the second quarter of 2023

Type of account	Debits only	Credits only	Credits and debits	No movement	TOTAL -millions NP-
Joint holding	9.8%	4.6%	71.6%	14.0%	<b>20.1</b>
Bank accounts	8.1%	6.5%	10.7%	74.7%	<b>14.0</b>
Payment accounts	10.0%	9.3%	47.3%	33.5%	<b>1.6</b>
<b>TOTAL</b> -millions NP-	<b>3.3</b>	<b>2.0</b>	<b>16.7</b>	<b>13.8</b>	<b>35.7</b>

Note | Bank accounts: bank accounts only; payment accounts: payment accounts only. NPs: natural persons.

Source | BCRA, based on COELSA.

### 3. Electronic Means of Payment, and Savings and Investment Methods

#### 3.1. Electronic Means of Payment

Globally, the adoption of electronic payment methods (MPEs) to the detriment of cash is accelerating. Regardless of the income level, countries around the globe are undergoing significant digitalization of payments and recording fewer cash withdrawals. MPEs play a key role in financial inclusion, as they are the gateway to the financial system.

Argentina is showing such performance as well, with a clear advance of MPEs in terms of GDP (76.6% for the second quarter of 2023 vs. 58.2% for the same period in 2022<sup>31</sup>). MPEs exhibit a sustained and high growth, with the number of transactions per adult and the change rate hitting a record high in the first half of 2023. This trend encompasses all electronic payment instruments, as each one of them showed a sustained increase in the number of transactions per adult to a greater or lesser extent.

As a consequence, a diversified use of MPEs is seen where the advance of new digital alternatives has supplemented traditional tools. Growth in MPEs as a whole is recorded accordingly.

**Volume and value.** In the first half of 2023, each adult made, on average, 25 monthly transactions through electronic means, reaching a historic high.<sup>32</sup> The number of transactions per adult was 62% up against the first half of 2022, the highest rate since the beginning of the series,<sup>33</sup> and was four times higher than the first half of 2019.

In turn, the amount transacted per adult rose 25% y.o.y. in real terms<sup>34</sup> in the first half of the year. Therefore, the average real amount of each electronic payment continued to follow a downward trend for the fifth consecutive six-month period, which might indicate that people are choosing digital methods for everyday transactions of relatively low amounts.

As in the previous three six-month periods, instant payments<sup>35</sup> made a significant contribution to the growth of MPEs—50 p.p. of 62% for volume and 21 p.p. of 25% for value. Consequently, instant payments, electronic transfers and PCTs were the most used payment methods by the adult population. In the first half of 2023, almost 6 out of 10 electronic payments were made by transfer or PCT, as opposed to 4 out of 10 one year earlier.

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<sup>31</sup> The numerator is obtained by dividing the amount transacted through MPEs in the second quarter of 2023 by GDP at current values for the same period.

<sup>32</sup> The volumes and values stated in this section are monthly averages in a six-month period.

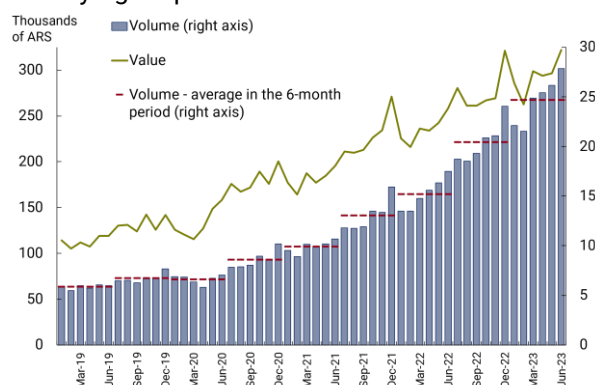
<sup>33</sup> Data available as from January 2016.

<sup>34</sup> Amounts are expressed at constant prices of June 2023 (CPI, June 2023 = 100).

<sup>35</sup> The term “instant payments” encompasses transfers and payments by transfer (PCTs). Transfers may include transactions other than payments, where there is no consideration for a service or the delivery of a good in exchange. However, these transactions are not deemed significant.

## Chart 9 | Electronic means of payment (MPEs)

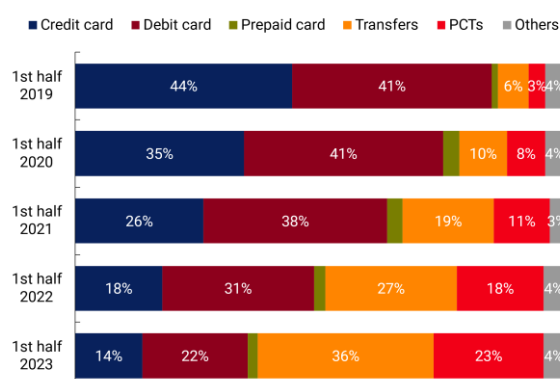
### Monthly figure per adult



Note | Others: this category includes direct debit and DEBIN.

Source | BCRA, INDEC and networks.

### Share in the number of transactions



The expansion of this type of payments which, together with debit card payments, account for 8 out of 10 electronic payments in the first half of 2023 might be associated with the advantages to merchants in terms of availability of collection and costs. Unlike credit cards, these instruments allow merchants to get paid within a short period or even immediately, and at no cost or relatively low fees (debit cards: 0.8%, and PCTs: 0.6% to 0.8%) for the recipient. On the other end, merchants selling on credit cards get paid over longer terms and at higher fees<sup>36</sup> as credit cards are used as both a payment and finance instrument. The share of credit cards in the number of transactions decreased (from 44% to 14% between the first half of 2023 and the same period of 2019).

The BCRA's regulation played a key role in encouraging the use of MPEs and discouraging the use of cash: (i) by the end of 2020, PCTs were launched to expand the scope of instant transfers to everyday payments; their distinctive feature is that funds are instantly credited and fees are low, thus saving merchants from cash handling costs (transportation, storage, security); and (ii) by mid-2021, FIs came to an agreement with the BCRA to reduce the term to credit the funds from debit card payments to one business day.

**MPEs and cash withdrawals.** The use of MPEs and cash withdrawals through ATMs and non-bank points (such as stores) might indicate that MPEs are gaining ground on cash (see Exhibit 2). People made a little more than 9 monthly payments with MPEs for every cash withdrawal<sup>37</sup> in the first half of 2023, as opposed to a little more than 5 electronic payments in the same period of 2022. At the same time, people made payments for around ARS7,300 using MPEs for every ARS1,000 withdrawn per month in the first half of 2023, as opposed to payments for ARS4,500 in the same period of 2022.

The development of means of payment regarding supermarket sales is an example of such performance. Payments in cash fell from 30% to 27% in terms of value between the first six

<sup>36</sup> Ten business days to credit the funds from May 2019; from July 2021, 8, 10 or 18 business days, depending on the company size. As for costs, the fee ranged from 2.1% to 1.8% (present rates).

<sup>37</sup> Monthly average in the six-month period.

months of 2022 and 2023, while debit cards and other means of payment grew 2 p.p. and 1 p.p., respectively.<sup>38</sup>

The expansion of digital payments to the detriment of cash withdrawals has taken place in different economies worldwide, regardless of the income level.

**Table 5 | Number of payments using MPEs for every cash withdrawal**

Data per inhabitant

Income Level	Country	2019	2020	2021	2021 / 2019
Lower middle	India	3,4	5,9	9,3	↑ 2,8
Upper middle	Indonesia	2,8	3,1	4,1	↑ 1,5
	Mexico	2,8	3,5	4,2	↑ 1,5
	<b>Argentina</b>	<b>2,2</b>	<b>2,9</b>	<b>4,1</b>	<b>↑ 1,9</b>
	Brazil	10,9	13,5	20,2	↑ 1,9
High	Italy	7,1	9,3	11,6	↑ 1,6
	Spain	9,6	14,8	17,6	↑ 1,8
	Germany	10,9	15,5	18,2	↑ 1,7
	Switzerland	18,0	19,9	24,8	↑ 1,4
	France	16,2	20,7	23,3	↑ 1,4
	Sweden	68,0	89,5	113,8	↑ 1,7

Note | The series published by the Bank for International Settlements (BIS) consider the following variables for the retail payments set: transfers, direct debits, debit and credit cards, and e-money payments. The "2021/2019" column is the result of dividing the "2021" and "2019" columns.

Argentina: the data published by the BIS match those published by the BCRA.

Source | [Withdrawals](#) and [MPEs](#) (BIS) and World Bank.

Although there is some heterogeneity among the countries in the sample<sup>39</sup> and within each income group in terms of the number of electronic payments for every cash withdrawal, all of them grew between 2019 and 2021.<sup>40</sup> Argentina's pre-pandemic figures are similar to those of other economies of the same income category, and posted the greatest growth together with Brazil for their group, and the second-best place for the entire sample.

Although the number of transactions using MPEs for every withdrawal varies among countries (which could be due to several factors, such as development of the digital payment systems, internet connection, digital skills, income composition), the global trend is the expansion of digital payments and decreased use of cash. This trend is stronger in lower-middle income and upper-middle countries, which start at a lower baseline than high-income economies.

<sup>38</sup> Source: INDEC. August 24, 2023. [Survey at Supermarkets](#). The share of debit cards climbed from 29% to 31%. The expression "other means of payment" includes vouchers, coupons, grocery stipends, and gift cards, among others.

<sup>39</sup> The sample includes countries with data available on all the variables used, except for the Netherlands (which has a unique scheme of MPEs) and Saudi Arabia.

<sup>40</sup> Latest period available.

### Box 3 / Devices and Initiation Channels<sup>41</sup>

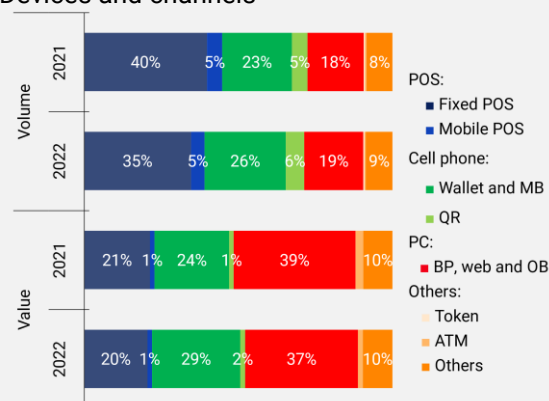
People may make their payments electronically through various channels, which are linked to a physical device (e.g., a cell phone). To learn about the physical devices that were mostly used,<sup>42</sup> the metrics for volume and value were grouped for each MPE based on the initiation channel involved. First, between 2021 and 2022<sup>43</sup> MPE transactions increased in both volume and value per adult in all physical devices and channels, except for ATMs.<sup>44</sup>

### Chart 10 | Share of devices and initiation channels

Share of transactions through MPE by device  
(volume, year 2022)

MPEs	POS	Cell phone	PC	Other	Total
Cards	37%	7%	0%	4%	48%
PCTs	2%	4%	14%	1%	21%
Transfers	0%	21%	5%	0%	26%
Other	0%	0%	0%	5%	5%
<b>Total</b>	<b>39%</b>	<b>32%</b>	<b>19%</b>	<b>10%</b>	<b>100%</b>

### Devices and channels



Note | Devices: POS terminal, cell phone, PC (computer) and others (ATMs, phone sale, token, etc.); channels: fixed POS terminal, mobile POS terminal, wallets, MB (mobile banking), quick response (QR) code, BP (payment button) (may be displayed in the store's website, embedded in social media or sent by email), web, OB (online banking), token (random key), ATMs, others. "Others": direct debit, instant debit, automatic debit, etc.

Source | BCRA, INDEC and networks.

**Number of transactions.** The cell phone is the device that grew the most in terms of number of electronic payments per adult (68% y.o.y.), gaining 4 p.p. In 2022, for every 10 transactions with MPEs, more than 3 were made using a cell phone, especially through mobile banking and/or digital wallets. Transactions made using a QR code on the cell phone should also be underscored, as they exhibited the highest positive change (72% y.o.y.). Transactions carried out through traditional devices, such as POS terminals, lost ground. However, POS devices recorded the highest number of transactions (nearly 4 out of 10) in the past year.

**Amount transacted.** The cell phone also grew the most between 2021 and 2022 (42% y.o.y.), gaining 4 p.p. As in the case of volume, digital wallets and mobile banking explained this performance. The rest of devices lost ground to the cell phone. However, computers (PCs) channeled the largest amounts through bank transfers using online banking (almost 4 times higher than those using mobile banking) in 2022.

<sup>41</sup> Based on the available data, the analysis considers all transactions with MPEs, except for transfers from a CBU to a CVU (volume and value) and interoperable PCTs (value) as there is no disaggregated information available. CBU-to-CVU transfers accounted for 2% and 5% in terms of volume, and 2% and 4% in terms of value of MPEs in 2021 and 2022, respectively. In turn, interoperable PCTs represented 3% and 2% of MPEs in terms of value.

<sup>42</sup> It is an approximate figure as channels such as the web and payment buttons may be used from a browser on a cell phone.

<sup>43</sup> The latest data available is for 2022.

<sup>44</sup> These have been replaced by other means of payment when it comes to transfers (see [IIF, second half of 2022](#)).



In line with high usage level, which grew in the past year,<sup>45</sup> cell phones are expected to gain ground as a device for making electronic payments. Such improvement to the detriment of PCs, in terms of value, reflects the lower, and declining, relative use of this technology (see Table 3).

#### **Instant Payments.<sup>46</sup>**

**(i) Electronic transfers.** During the first half of 2023, transfers proved to be the instrument mostly preferred by individuals to make electronic payments (36% of the total).<sup>47</sup> The number of transfers made by adults averaged 8.9 per month, which more than doubled the number of transactions made in the first half of 2022. This growth was driven by the dynamics of transfers made from a mobile phone.<sup>48</sup>

Transfers, in addition to being the most chosen instrument, continued channeling the highest amount of total MPEs (59%) per adult. As regards transactions through payment accounts (CVU), it is worth mentioning that the number of operations is higher than the amounts operated. On the contrary, transactions through bank accounts account for higher amounts transferred than for the number of transactions in relative terms.

During the first half of 2023, adults executed more than twice the number of transfers between bank and payment accounts on average compared to the same period in 2022 (3.2 vs. 1.2, respectively). Thus, the interoperability model between different accounts has consolidated, which accounted for 36% of total transfers—6 p.p. more than in the first half of 2022. Against the backdrop of this trend—which reflects the BCRA's determination to take advantage of the interoperability between bank and payment accounts—the amounts per adult also proved to grow, though to a lesser extent (75% y.o.y.).

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<sup>45</sup> In the last quarter of 2022, 89.3% of the population aged 4+ in urban agglomerations used a cell phone, rising 1.2 p.p. from the same period a year earlier. Source: INDEC: Access and Use of IT and Communication Technologies. Permanent Household Survey (EPH). [Fourth quarter of 2022](#). [Fourth quarter of 2021](#).

<sup>46</sup> See footnote 35.

<sup>47</sup> It should be noted that these transactions involve cash movements which are not necessarily payments. On the basis of the data available, it is not possible to tell apart transactions which are not payments from those which actually are.

<sup>48</sup> Transfers made through mobile devices are calculated by adding transactions performed from CVU to CBU, CVU to CVU, intra PSPs, and between FIs through MB. This addition explained 82.7 p.p. of a 117.3% year-on-year change rate.

**Table 6 | Instant payments**

Origin account-target account	Number per adult			Amount per adult		
	1st half 2022	1st half 2023	Contribution to Δ y.o.y. (%)	1st half 2022	1st half 2023	Contribution to Δ y.o.y. (%)
<b>Total</b>	<b>6,8</b>	<b>14,4</b>	<b>112,7</b>	<b>150.361</b>	<b>199.798</b>	<b>32,9</b>
Electronic transfers (i)	4,1	8,9	70,6	132.445	172.593	26,7
Payments by transfer (ii)	2,7	5,6	42,1	17.917	27.205	6,2
<b>Environment</b>						
Between PSP and FI	1,8	4,0	32,5	35.292	56.709	14,2
Intra PSP	3,6	8,1	67,5	21.658	39.595	11,9
Intra FI (1)	1,4	2,3	12,8	93.412	103.494	6,7
<b>Proxy device</b>						
Mobile device	5,4	11,7	91,9	66.135	103.169	24,6
Other devices	1,4	2,8	20,8	84.227	96.083	7,9
<b>Electronic transfers (i)</b>						
<b>Total</b>	<b>4,1</b>	<b>8,9</b>	<b>117,3</b>	<b>132.445</b>	<b>172.593</b>	<b>30,3</b>
<b>Between PSP and FI</b>	<b>1,2</b>	<b>3,2</b>	<b>47,5</b>	<b>29.137</b>	<b>50.992</b>	<b>16,5</b>
CBU to CVU	0,5	1,7	28,0	8.007	18.022	7,6
CVU to CBU	0,7	1,5	19,5	21.131	32.971	8,9
<b>Intra PSP</b>	<b>1,4</b>	<b>3,4</b>	<b>48,6</b>	<b>9.896</b>	<b>18.106</b>	<b>6,2</b>
Intra PSP	1,2	3,0	42,0	7.995	14.392	4,8
CVU to CVU	0,2	0,5	6,6	1.900	3.715	1,4
<b>Intra FI (1)</b>	<b>1,4</b>	<b>2,3</b>	<b>21,2</b>	<b>93.412</b>	<b>103.494</b>	<b>7,6</b>
OB	0,8	1,0	6,7	72.291	74.971	2,0
MB	0,6	1,2	14,6	17.192	25.433	6,2
ATM	0,1	0,0 -	0,1	3.929	3.090 -	0,6
<b>Payments by transfer (ii)</b>						
<b>Total</b>	<b>2,7</b>	<b>5,6</b>	<b>105,8</b>	<b>17.917</b>	<b>26.659</b>	<b>48,8</b>
Interoperable (2)	0,6	0,8	9,7	6.155	5.717 -	2,4
Intra PSP	2,1	4,7	96,1	11.762	21.488	54,3

Note | Amounts at constant prices of June 2023 (CPI June 2023 = 100). (1) CBU to CBU, interbank transfers. Intra bank transfers are not included. (2) Interoperable PCTs are made among different PSPs/FIs, and include those initiated with interoperable QR codes, with POS using card credentials, tokens and payment buttons. (3) Change rate in bold black type; contribution rate in green. OB: online banking. MB: mobile banking.

Source | BCRA, INDEC and networks.

**(ii) Payments by transfer (PCTs).**<sup>49</sup> In the first half of 2023, each adult made 5.6 monthly payments through PCTs on average, twice the number operated in the same period in 2022, becoming the second most chosen MPE instrument together with debit cards. Amounts per adult accounted for 52% more than in the first half of 2022. The PCT dynamics was mainly explained by transactions executed by users of the same PSP.

<sup>49</sup> PCTs are instant transfers used to pay for goods and/or services as agreed with a PCT acquirer involved. The PCT acquirer provides tools for shops to receive PCTs, which are governed by commercial rules different from those applicable to instant transfers ([Report on Retail Payments](#), BCRA).

Interoperable PCTs<sup>50</sup> rose 45.6% y.o.y. in terms of numbers per adult, mostly driven by transactions initiated through QR codes. Intra-PSP PCTs recorded a three-digit growth (122% y.o.y.), mainly explained by payments made with payment buttons and through a website, which are associated with e-commerce.

**Debit cards.** In the first six months of 2023, payments on debit cards went on exhibiting an upward trend (+13%). This trend could be explained by the population's familiarity with debit card operations, shorter terms for shop owners to get paid, along with the discounts offered by FIs for purchases made on this means of payment, among other factors.

With the return to in-person activities, traditional POS devices constituted the chosen channel for debit card transactions (8 out of 10 payments were made on POS devices in the first quarter of 2023). This was evident in a context where the stock of operative POS devices remained unchanged (about 490,000 as of June 2023), each of them recording 24% more transactions on average.

### 3.2. Savings and Investment Methods<sup>51</sup>

Natural persons (NPs) may opt for allocating money to different savings and investment products, according to their liquidity goals, terms and risk/return ratio. Considering products offered by financial institutions (FIs) and payment service providers (PSPs), the stock of savings and investment of NPs stood at 8.5% of GDP as of the second quarter of 2023.<sup>52</sup> In that period, the stock of savings and investment consisted of 49% immediate liquidity products, and of 51% short- and medium-term products.

In the past year (Dec-21 vs. Dec-22), the trend of change in the NPs' portfolio continued to intensify, with a reduction in holdings of immediate liquidity instruments and an increase in longer-term and higher-return instruments. Furthermore, within the stocks of immediate liquidity instruments, there were also changes in their composition, with a 71.7%<sup>53</sup> increase in the stocks of NPs' money market funds (MMF-NP)<sup>54</sup> and a 13.9% decrease in account balances between June 2022 and June 2023.

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<sup>50</sup> Interoperable PCTs are made among different PSPs/FIs, and include those initiated with interoperable QR codes, with POS using card credentials, tokens and payment buttons.

<sup>51</sup> Amounts are expressed at constant prices of June 2023 (CPI, INDEC, June 2023 = 100).

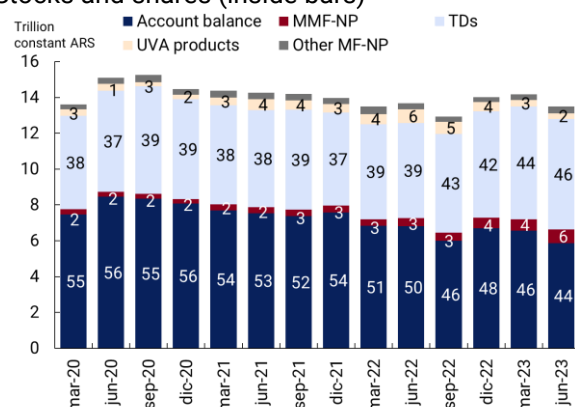
<sup>52</sup> The stock is calculated as the sum of the stocks of each of the savings and investment products at current values for the second quarter of 2023, and it is divided by the GDP of the same quarter at current values.

<sup>53</sup> The significant increase in MMF-NP's real balances could be attributed to a combination of successive increases in the monetary policy rate, the flexibility and liquidity provided by this financial vehicle, and the diversification of savers' investments. The supply of available MMF increased from 50 in December 2022 to 54 in June 2023.

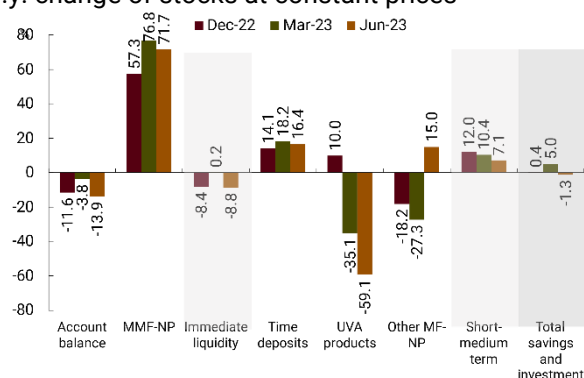
<sup>54</sup> MMFs are mutual funds (MFs) characterized by their high liquidity and very low volatility. These funds invest in very short-term assets, mainly TDs, sight deposits, repos, and securities guaranteed loans transactions. See [Glossary, CACFI](#).

**Chart 11 | NPs' savings and investment products**

Stocks and shares (inside bars)



Y.o.y. change of stocks at constant prices



Note | The chart on the left shows NPs' stocks of savings and investment products in domestic and foreign currency. One trillion equals one million million. The values inside the bars refer to the percentage shares of each group. The chart on the right shows bars indicating percentage changes.

Source | BCRA, Argentine Chamber of Mutual Funds (CAFCI) and INDEC.

On the contrary, the stocks invested in short- and medium-term instruments (traditional TDs, products denominated in units of purchasing power (UVAs) and other mutual funds (MFs)) grew by 7.1%. Stocks in traditional TDs<sup>55</sup> and in other MFs<sup>56</sup> increased by 16.4% and 15%, respectively, but the stocks of UVA products fell 59.1%.

The rise in the minimum interest rate on NPs' TDs in pesos during 2022 and the first half of 2023 had a positive impact on retail savers. The more convenient returns might be one of the factors that explains the growth in the stocks of TDs and MMFs .

Moreover, the increased availability of savings and investment instruments, the growing number of holdings of different types of accounts and their interoperability enabled individuals to allocate resources to active savings alternatives that allow them to immobilize lower amounts of funds in their accounts, recording minimum values (44%) in the second quarter of 2023. However, they still account for a high share of NPs' savings and investment products.

**Time deposits.** As of June 2023, there were 8.2 TDs in pesos every 100 bank accounts made by NPs,<sup>57</sup> reaching a high compared to the past 4 years. Between June 2022 and June 2023, this metric rose 45% on account of a significant increase of 54% in the number of TDs. This growth is also reflected in a higher share of TDs in pesos in the total stock of savings and investment products, going up from 37% in June 2022 to 43% in June 2023.

The high year-on-year growth in the number of deposits, together with a smaller increase in the total stocks of this product (13%), resulted in a 26% decrease in TD average stocks. These rises

<sup>55</sup> Traditional TDs are those referred to in the Consolidated Text on [Time Deposits and Investments](#), Section 1, subsections 1.8 and 1.9.

<sup>56</sup> The other MFs have a higher return, but also a higher risk and lower liquidity. They can be fixed return funds (bonds), variable return funds (shares), mixed return funds, structured funds, among others. See [Glossary, CAFCI](#).

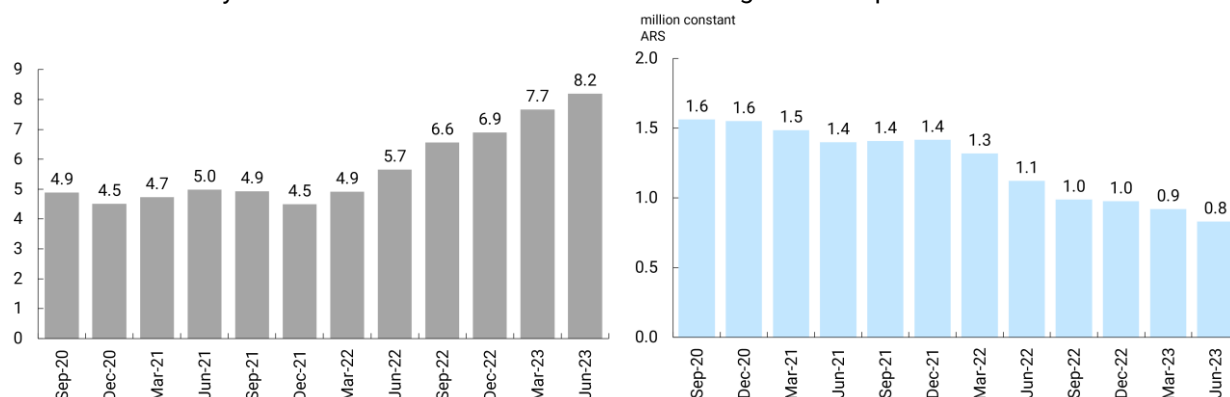
<sup>57</sup> Only accounts in pesos are considered.

are in line with the improvement in the number of non-financial private sector (SPNF) TD holders, which went from 3.5 million in June 2022 to 4.6 million in March 2023.<sup>58</sup>

**Chart 12 | Time deposits in relation to the pool of bank accounts and average balances**

Number of TD every 100 bank accounts

Average balance per certificate



Note | The number of TDs includes time deposits in pesos and adjusted based on UVA with no early-termination option. The chart on the left considers the bank accounts of FIs that offer TDs. "TD": time deposit.

Source | BCRA, CAFCI, COELSA and INDEC.

Furthermore, following the outbreak of the COVID-19 pandemic, various financial institutions enabled users to set up TDs through electronic channels, thus contributing to the positive dynamics of TDs.<sup>59</sup> In terms of balance, 83% of TD balances in domestic currency as of June 2023 are concentrated in electronic channels.<sup>60</sup>

**Liquidity management.** In the last three years, balances of MMFs from PSPs and from FIs grew compared to balances in payment and bank accounts, with year-on-year increases of 90% and 81% as of June 2023. The growing digitalization—evidenced by the increasing number of bank apps and virtual wallets—and the need to preserve purchasing power boosted the growth of account balances in this kind of investment product, both in value and in terms of account balances. However, its yield is lower than that of TDs due to MMFs' high liquidity.<sup>61</sup> This prevents MMFs' balances from having a significant share in NPs' savings and investment products.

As of June 2023, MMF stocks from PSPs for every ARS100 in payment accounts exceeded 20 times the MMF stocks from FIs in terms of bank account balances. This disparity might be due to various factors: (i) PSPs that offer MMF as the sole investment option, so the investor channels funds only to those instruments; (ii) the streamlining of the subscription process and use of MMFs from PSPs together with the ease to turn those funds into liquid cash to perform transactions encouraged the creation of MMFs from PSPs with balances previously kept in

<sup>58</sup> See [Number of holders of products offered by financial institutions, by institutional group](#) (BCRA). This variable also considers LPs' TDs.

<sup>59</sup> According to the information submitted to the BCRA by FIs, 87% of TDs in domestic currency were made through home banking and mobile banking in the six-month period between September 2022 and February 2023. This share was higher than the 80% recorded in the six-month period between September 2020 and February 2021.

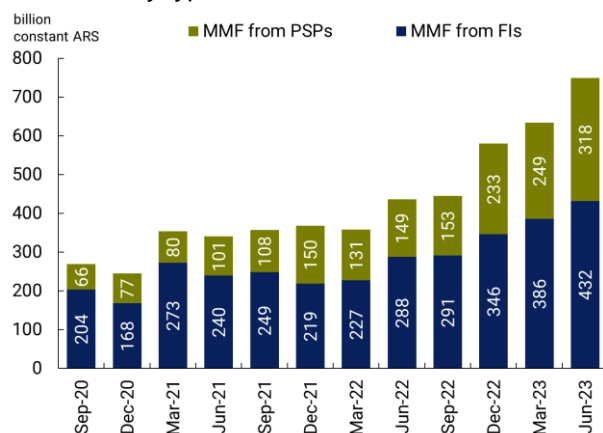
<sup>60</sup> June 2023. TDs from the non financial private sector, [Information on Financial Institutions](#), BCRA.

<sup>61</sup> In domestic currency.

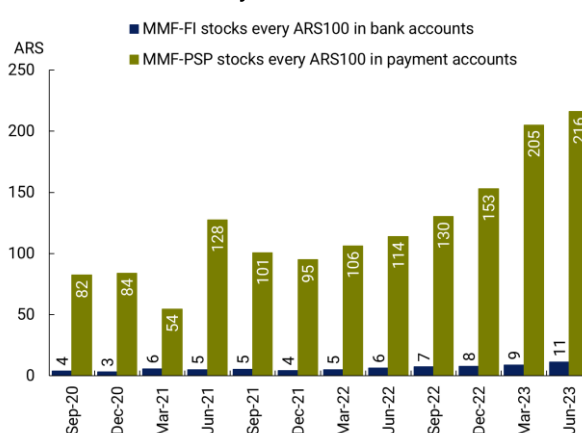
payment accounts. In turn, NPs' accounts at PSPs from MMF stocks rose from 4.9 million in June 2022 to 8.8 million in June 2023 (+80%). This growing uptake is reflected in the fact that 32.7% of payment accounts recorded MMF stocks as of June 2023.<sup>62</sup>

### Chart 13 | MMF stocks

MMF stocks by type of institution



MMF stocks for every ARS100 of account balance



Source | BCRA, CAFCI and INDEC.

In turn, FIs offer a wider variety of savings and investment instruments. This would drive users to choose more profitable alternatives to invest their money, such as TDs in pesos, investing a low share of balances in MMFs from FIs. Additionally, balances in bank accounts exceed 26 times those in payment accounts, reducing the ratio between balances in MMFs and FIs' accounts. This would show the preference of users to keep their funds immobilized in bank accounts rather than in payment accounts because of their easier conditions to operate, the possibility of having cash, and the greater security derived from the regulatory framework.

It should be mentioned that 40% of persons with at least one account have only a bank account. These individuals tend to make fewer transactions and probably use their accounts less to make MMFs, which would lower the ratio of balances in MMFs compared to balances in FIs' accounts.

<sup>62</sup> Data based on COELSA and BCRA's Reporting Regime for Payment Service Providers.

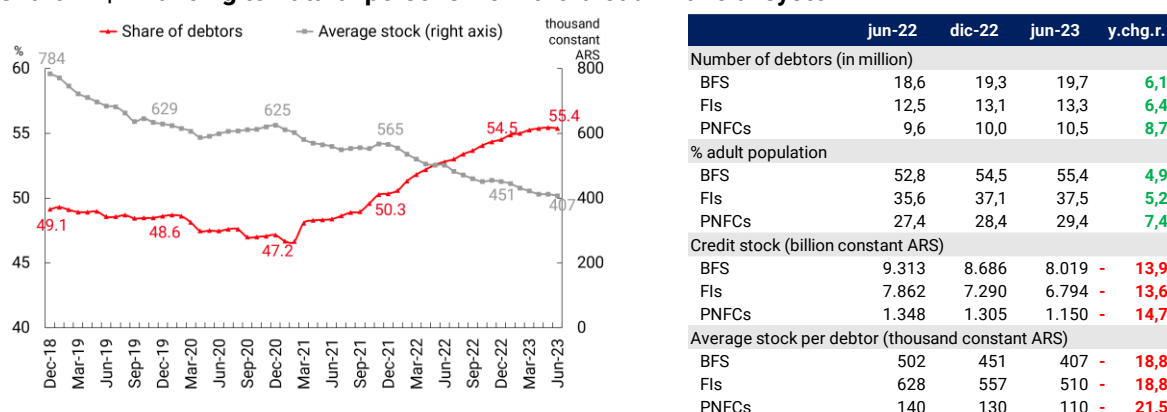
## 4. Credit

### 4.1. Credit to Natural Persons

The number of natural persons (NPs) with financing from the broad financial system (BFS) reached 19.7 million in June 2023, which means that 55.4% of the adult population had at least one credit product.<sup>63</sup> Such group recorded a 0.9 p.p. net increase *vis-à-vis* December 2022, comprising new debtors but at a slower pace compared to previous periods. In particular, the share of the population with credit stabilized during the second quarter of the year.

The total stock of NPs' financing within the BFS declined 8% in real terms, causing the average stock per debtor to drop. Thus, the BFS has incorporated new debtors, but the average stock of financing has dropped. This performance is mainly boosted by other non-financial credit providers (OPNFCs) that grant small-amount online personal loans.

**Chart 14 | Financing to natural persons from the broad financial system**



Note | y.chg.r.: year-on-year change rate.

Source | BCRA and INDEC.

**Credit providers.**<sup>64</sup> The analysis of financial institutions (FIs) shows that, as of June 2023, private banks granted financing to 9.6 million persons (27% of the adult population), whereas public banks reached 4.9 million (13.8% of the adult population). Both private and public banks recorded a 2% increase in the number of adult persons who obtained financing compared to the figure observed in December 2022. In terms of stocks,<sup>65</sup> both private and public banks deepened their tendency to decrease the average amount financed per debtor, which stood at 7% for the former and 10% for the latter in the first half of 2023. However, public banks continue to channel the highest financing in the BFS, exceeding by 40% the average stock per debtor at private banks.

<sup>63</sup> It includes financial institutions (FIs) and non financial credit providers (PNFCs). Throughout the section, metrics consolidate sole debtors within the group of providers taken as reference. Overlapping credit lines granted by the same provider and those channeled to the same group under analysis have been removed.

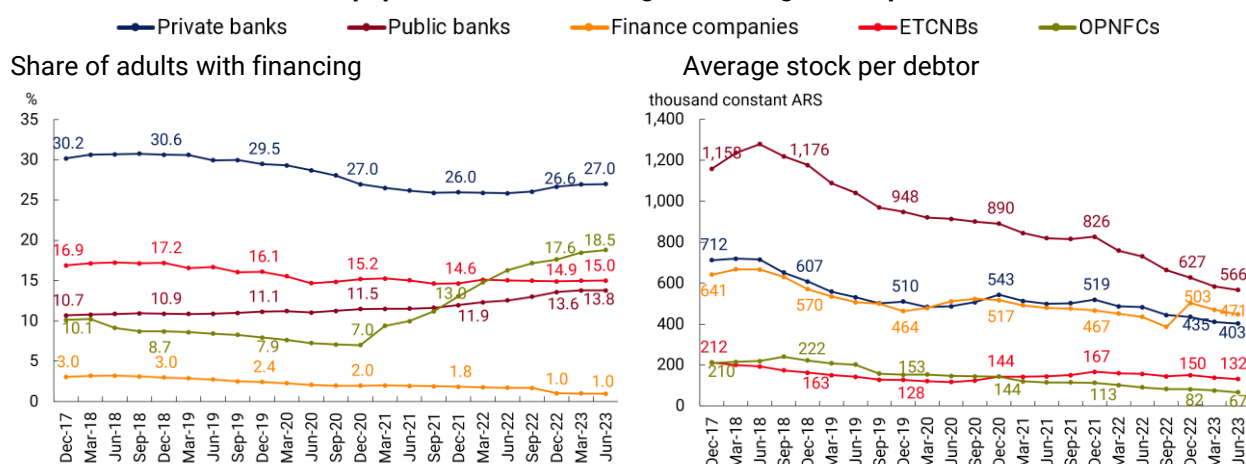
<sup>64</sup> Credit providers comprise two big groups with defined characteristics: FIs and PNFCs. Some of the factors that distinguish FIs from PNFCs are types of products, submission of documentation, financing cost and amount, ways of managing credit (face-to-face or online) and business models. Both groups are regulated by the BCRA.

<sup>65</sup> Amounts are expressed at constant prices of June 2023 (CPI, June 2023 = 100).



Among PNFCs, non-bank credit card issuers (ETCNBs) financed 5.3 million persons (15% of the adult population). This figure has not shown significant changes since December 2020. The average stock per debtor financed by ETCNBs was more stable over time than the average stock financed by other institutional groups. However, the average stock per debtor declined 13% during the first half of the year, and is still significantly lower than that of FIs.

**Chart 15 | Share of the adult population with financing and average stock per debtor<sup>66</sup>**



Note | Chart on the left: the addition of percentages does not coincide with the values in Chart 14 due to the count of sole debtors at institutional group level (see footnote 63).

Source | BCRA and INDEC.

OPNFCs, in turn, continued increasing the number of new debtors, reaching 6.7 million persons as of June 2023 (7% rise in the first half of the year). Nevertheless, a clear and constant fall is observed in the average stock per debtor, which fell by 19% (53% compared to December 2020) between December 2022 and June 2023; thus, OPNFCs' average stock per debtor accounted for only 13% of FIs' average stock per debtor. Even though OPNFCs led the highest number of persons to formal financing (a 177% rise in the number of borrowers between December 2020 and June 2023), their average stock financed per debtor exhibited the highest fall.<sup>67</sup>

The gap in the average stock of financing between public and private banks was one of the stylized facts that took place in the past years. From end-2017 to the end of the first half of 2023, the average outstanding debt to public banks was, at least, 40% higher than the debt to private banks. This is attributable to the fact that financing from ARS10 million is more significant in public banks than in private ones. Also, the difference is replicated in the share of collateralized debt. The percentage of collateralized debt is significantly higher in public banks than in private ones.<sup>68</sup> Thus, the difference in the average outstanding debt does not result from soft biases in

<sup>66</sup> During the last quarter of 2022, a finance company and a private bank merged, which caused the finance companies' number of debtors to fall and their average stock to change.

<sup>67</sup> This is particularly explained by the appearance of fintechs in the credit market, which are providers that increased their client portfolio significantly over the last few years (see the [Report on Non-Financial Credit Providers](#)).

<sup>68</sup> According to the "Information on Financial Institutions" report, defaulters of public banks with a debt ranging from ARS10 to ARS25 million accounted for 1.03% of their borrowers, and for 16.3% of their financing portfolio. In the case of private banks, these indicators declined to 0.21% for debtors' portfolio and to 4.84% for financing stocks. In addition, the share of outstanding



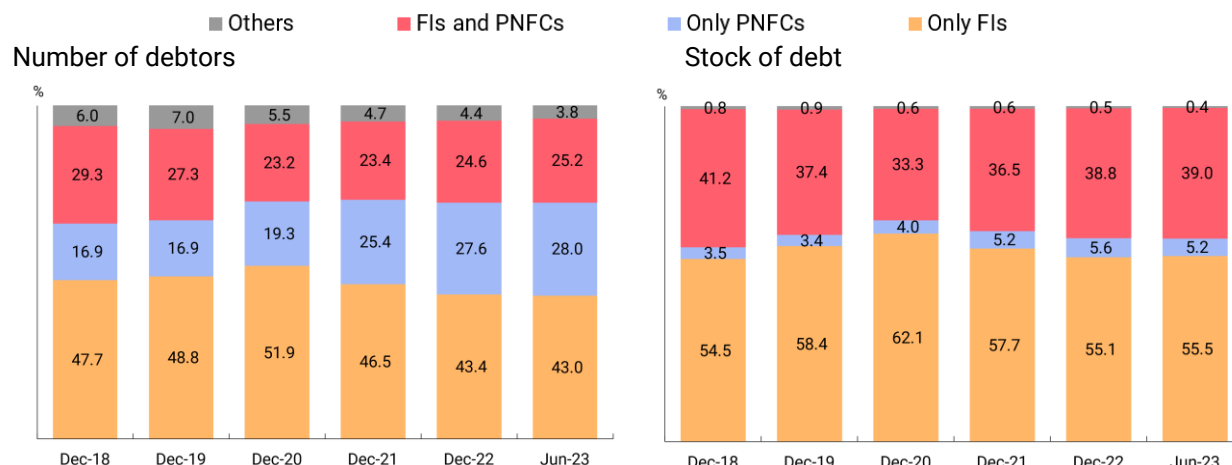
the distribution of financing stocks in tranches between the private and public banks, but rather from concentrations in certain tranches. This is due to the fact that public banks recorded a higher offering of long-term financing products.

As of June 2023, 43% of total debtors held a debt exclusively with FIs (that is, they did not hold a parallel financing with a PNFC), whereas 28% recorded a debt only with a PNFC. The group of persons with financing with both kinds of providers reached 25.2%. The share of persons with financing only with FIs decreased while the share of persons with debt only with PNFCs increased. This is observed throughout the series and is in line with the growth of debtors recorded in PNFCs. These data would confirm that the new debtors that were granted financing from PNFCs over the last few years are mostly persons with no debt in FIs.

Moreover, as of June 2023, 55.5% of the total debt stock belonged to persons with debt only in FIs, compared to 5.2% of the stock for persons with debt only in PNFCs. In other words, PNFCs allocated fewer stocks to financing.

Then, it is reasonable to ask whether access to financing from a group of providers over another is due to factors that affect and/or limit access possibilities (for instance, the income level or labor condition<sup>69</sup>).

**Chart 16 | Distribution of debtors and stock of debt**



Note | Only FIs: it means that debtors recorded financing only with FIs (but not in PNFCs, though they may have debt in financial trusts (FTs)). Only PNFCs: it means that debtors recorded financing only with PNFCs (but not in FIs, though they may or may not have debt in FTs). FIs and PNFCs: it refers to the existence of financing both with FIs and PNFCs at the same time (with or without debt in FTs). Others: it includes debtors with debt only in FTs.<sup>70</sup>

Source | BCRA.

collateralized debt was 63% for public banks and 30% for private ones. However, total collateralized stocks accounted for a 28% credit portfolio in public banks, and 11% in private banks.

<sup>69</sup> IIF, second half of 2022.

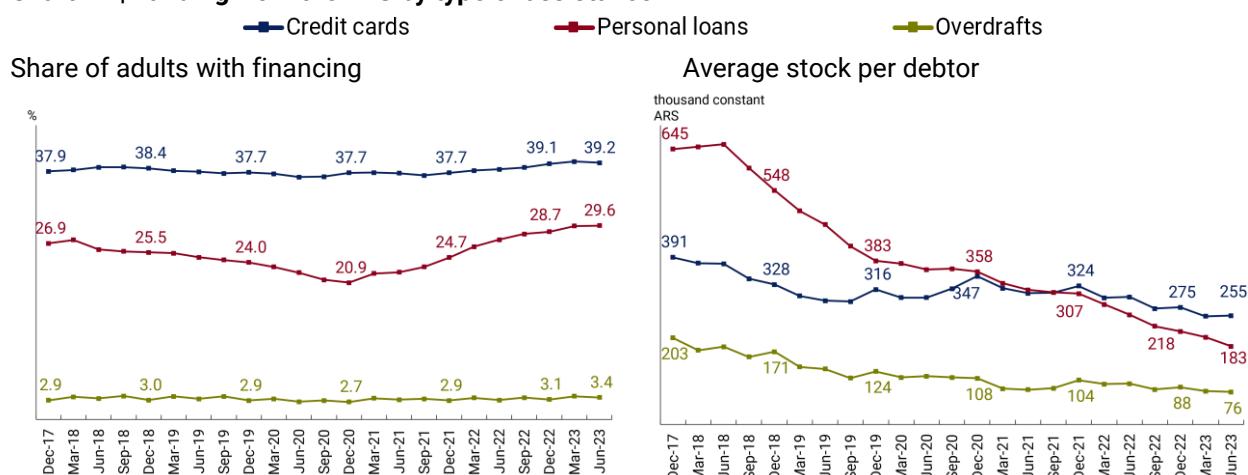
<sup>70</sup> With the data available to date, it is not possible to determine whether the debt in FTs originated in FIs or PNFCs. For this reason, the information under "Others" refers to debtors recording debt only in FTs; "Only FIs" includes debtors in FTs and FIs; "Only PNFCs" includes debtors in FTs and PNFCs; "FIs and PNFCs" includes debtors in FTs, FIs and PNFCs.

**Financing characteristics.** Segregated by type of assistance, the credit card is the most widespread financing instrument, reaching 39.2% of the adult population in June 2023. During the first half of the year, the number of credit card debtors remained relatively stable, while the average stock per debtor recorded a 7% decrease in the same period. In recent years, debtors with credit card financing have followed a slight upward trend, though with a decreasing average stock per debtor.

Personal loans are in second place, with a reach of 29.6% of the adult population in June 2023. During the first half of 2023, this indicator went up by 0.9 p.p., accumulating a total increase of 8.7 p.p. between December 2020 and June 2023. This implies that around 3.3 million additional NPs obtained credit during the period mentioned in the last place, positioning personal loans as the type of assistance with the highest growth. This type of financing continues to experience significant growth, driven primarily by OPNFCs that provide consumer loans through digital channels.

However, the average stock per debtor at constant values recorded a 16% decline during the first half of 2023, a reduction that reaches 49% when comparing June 2023 with December 2020. This performance indicates that the new loans granted account for considerably lower amounts. Even though the two types of assistance analyzed show reductions in the average stock, there was a steeper and more consistent decline in personal loans. As a result, the stock for personal loans has been lower than that of credit cards since September 2021.

**Chart 17 | Funding from the BFS by type of assistance**



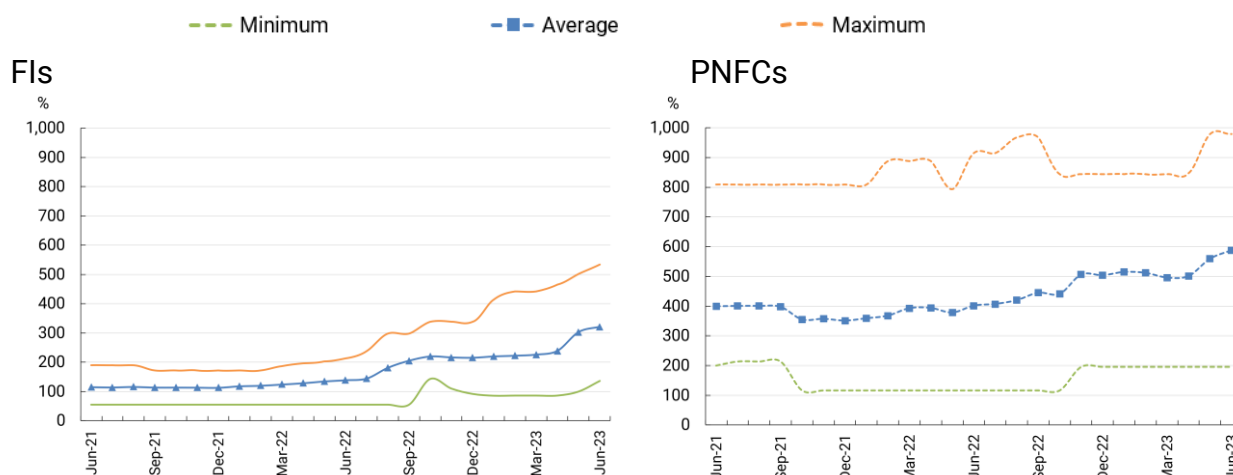
Source | BCRA and INDEC.

One of the differences between FIs' personal loans and PNFCs' personal loans lies in the cost of financing for users.<sup>71</sup> The BCRA's Transparency Reporting System compiles the maximum total effective financial cost (CFT) offered by credit providers, among other financing characteristics.

<sup>71</sup> Along with the financial cost, the maximum amount offered and the financing term are other factors that differentiate both sets of providers.

According to these data,<sup>72</sup> the maximum CFT on personal loans set by PNFCs nearly doubled, on average, the CFT established by FIs in June 2023 (588% for PNFCs vs. 321% for FIs). Over the last 24 months, the average maximum CFT has consistently been higher for PNFCs than for FIs, although the difference between both CFTs shows a downward trend. In June 2021, the average maximum CFT of PNFCs was 3.5 times that of FIs, while in June 2023, this ratio was 1.8 times.

**Chart 18 | Maximum CFT on personal loans**



Note | The data correspond to a sample of 15 providers with the highest number of debtors as of June 2023 in each group (FIs and PNFCs), reporting data on personal loans to the BCRA's Transparency Reporting System. Personal loans in pesos to NPs are included. These loans may be offered at a national level or in specific provinces and may be targeted at the general public or specific groups (e.g., persons receiving their income from a FI or persons with certain employment conditions).

Source | BCRA.

### Characteristics of debtors.

**\*Gender.** As of June 2023, FIs' portfolio of debtors accounted for nearly the same share for men (49.9%) and for women (50.1%).<sup>73</sup> These proportions have remained relatively constant over the past few years. However, when comparing the current situation to that of December 2019, there is an improvement of 0.6 p.p. in the share of women. In turn, PNFCs' portfolio of debtors records a higher share of women (52.6% vs. 47.4% of men). Likewise, the share of women has increased progressively over the past few years. It is worth noting that the number of women virtually matched that of men in December 2019. Thus, while the number of debtors increased in both genders, women would have a greater predominance among the new borrowers.

**\*Age.**<sup>74</sup> A larger proportion of debtors from PNFCs were young. As of June 2023, the group of debtors aged 18 to 25 had a share of 9.9% in total PNFCs' debtors, while for FIs' debtors, it reached 4.5%. For debtors under 34 years old, PNFCs accounted for 34.6% and FIs, 23.2%. The

<sup>72</sup> For this analysis, a sample comprising 15 FIs and 15 PNFCs was chosen in terms of those having the highest number of debtors as of June 2023. Additionally, these institutions had to provide information related to personal loans within the aforementioned regulatory framework. The 30 providers encompass 81% of debtors and 88% of the stock of debt for FIs, and 74% of debtors and 80% of the stock for PNFCs as of June 2023.

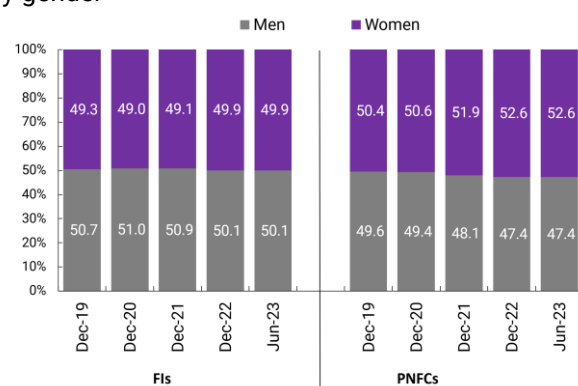
<sup>73</sup> As of June 2023, the distribution of the country's adult population was as follows: women 51.6% and men 48.4%. Source: INDEC. As of that date, the percentage of adult women with at least one credit product from a FI was 36.2%, while for adult men, it was 38.8%. As for PNFCs, the percentage of adult women with at least one credit product was 29.9%, and for adult men, it was 28.7%.

<sup>74</sup> As of June 2023, lending sorted out by age was as follows: between 15 and 24 years old, 20%; from 25 to 34, 20%; from 35 to 49, 26%; and over 50 years old, 34%. Source: INDEC.

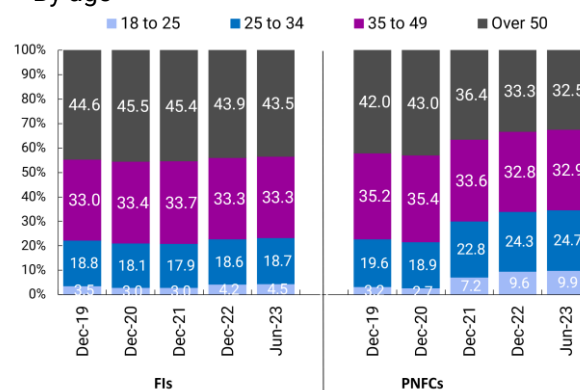
intermediate age group—persons between 35 and 49 years old—concentrated similar values in both sets of providers, whereas for individuals over 50, there was a higher share in FIs than in PNFCs (43.5% vs. 32.5%). With these values, it is evident that there is a clear focus of PNFCs on the younger population and FIs on people over 50, a trend that PNFCs have deepened in recent years. The strongly digital component of the main PNFCs is a relevant factor to bring young persons into financing.

**Chart 19 | Distribution of debtors in terms of socio-demographic characteristics**

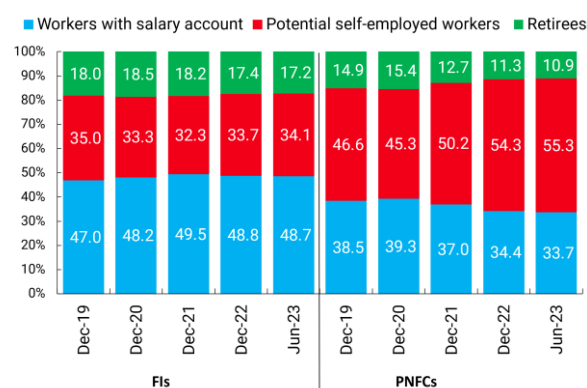
By gender



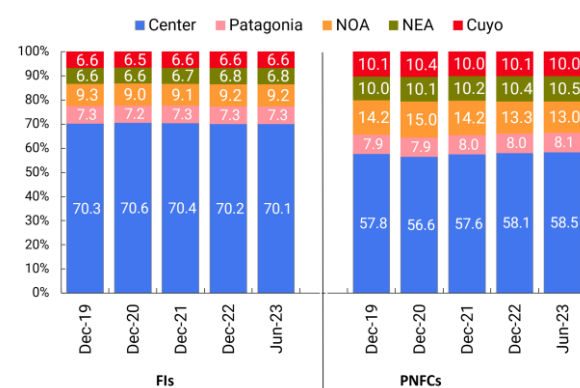
By age



By type of income



By region



Note | “Workers with a salary account” means all debtors who collect their wages through salary accounts. “Potential self-employed workers” refers to debtors between 15 and 64 years of age with no salary accounts. “Retirees” refers to debtors aged 65 and over with no salary accounts.

Source | BCRA.

**\*Type of income.** By combining the presence (or absence) of salary deposits in a bank account with age, the source of debtors’ income is estimated and analyzed among different credit providers. A salary deposit in a bank account flags an employment relationship. On the other hand, working age debtors without a salary account may have some type of income from a self-employment job, while those over 65 without a salary account may collect a retirement pay for having reached the retirement age.

Thus, as of June 2023, 48.7% of total FIs' debtors and 33.7% of total PNFCs' debtors held a salary account. Potential self-employed workers had a greater presence among PNFCs (accounting for 55.3% of the total), while for FIs, workers with a salary account had the greatest weight. The highest proportion of workers with a salary account among FIs' debtors may be associated with the fact that wages can be collected through FIs rather than through PNFCs. In general, FIs offer a product bundle along with the salary account, including credit cards, which contributes to increasing the number of persons with financing with FIs.

At the same time, retirees and pensioners have a greater presence among FIs' debtors than PNFCs'. The collection of retirement payments from bank accounts also contributes to increasing the participation of this group among FIs' debtors, while the lack of sufficient digital skills of older adults may adversely affect their access to digital financing from PNFCs. The analysis of the time series shows that the distribution of debtors by type of income remains relatively stable for FIs, while for PNFCs, potential self-employed workers have been increasing their share to the detriment of employees and retirees.

**\*Region.** In terms of the geographical distribution of debtors as of June 2023, FIs concentrated a higher share of their debtors in the central region, accounting for 70.1% of the total compared to 58.5% for PNFCs.<sup>75</sup> In second place, both sets of providers were in the Argentine northwestern region (NOA) (with 9.2% and 13% for FIs and PNFCs, respectively). Patagonia was the third region for FIs but had the lowest share of debtors for PNFCs. Regarding the distribution by regions, no significant changes are evident in the series over time.

#### 4.2. Credit to Productive Units

The global vision of financial inclusion identifies the set of MSMEs as a vulnerable group in terms of access and use of financial services. In particular, lack of access to financing is an important barrier against the expansion process for MSMEs. Some of the factors that may explain this barrier are as follows: lack of guarantees, documentation requirements (*sic*),<sup>76</sup> absence of data to assess solvency, high levels of informality, and uncertainty about the macroeconomic context.<sup>77</sup>

In the early stages, companies tend to use their own resources to face the business cycle. Later, the need for external financing increases as they undertake growth plans that require investment and productivity improvements. By definition, the group of MSMEs encompasses productive units that are in different stages of the business expansion cycle; therefore, they face different challenges in their financial inclusion process.

To address these issues, over the years, the BCRA has issued regulations aimed at improving the credit for MSMEs. Such regulations can be classified into three groups:

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<sup>75</sup> As of June 2023, the distribution of the adult population was as follows: Center: 65.1%, NOA 11.4%, NEA 8.9%, Cuyo 8.1% and Patagonia 6.5%. Source: INDEC.

<sup>76</sup> [Promoting Digital and Innovative SME Financing, GPFI, 2020.](#)

<sup>77</sup> [Financial Inclusion of Small- and Medium-Sized Enterprises in Argentina, Sergio Woyecheszen, ECLAC, 2017.](#)

### 1. **Encouraging FIs to expand their credit offerings:**<sup>78</sup>

**LFIP:**<sup>79</sup> It establishes a monthly pool of resources that FIs must allocate to MSMEs at an interest rate cap. For the funding of this line, FIs must allocate a percentage of deposits from the SPNF.

#### **Reduction of minimum cash requirements when:**

- credit to MSMEs in the total portfolio of FIs represents 4% or more;
- credit is granted to MSMEs not reported by FIs in the Debtors' Database of the Financial System (CENDEU) in December 2020.

**Collateral delivery:** Collaterals enable MSMEs to have access to financing. In case the company is unable to settle the debt, a third party will cover the payment. The regulation provides incentives for FIs to grant financing to MSMEs with a collateral from SGRs. At the same time, it establishes financial requirements for building a risk fund and provides for SGRs' exposure to MSMEs' risk.

### 2. **Creation of environments for trading new financial instruments:**

- System for the open transfer (SCA) of OTC circulation, trading, transmission, and settlement of electronic credit invoices for MSMEs (FCEMs).
- Database of outstanding FCEM upon maturity.

### 3. **Simplification in credit management:**

- Financing of low amounts where only documentation related to client identification is required (maximum amount: 8 minimum wages);
- Use of credit scoring models to assess risk and/or the possibility of default in order to replace income verification through specific documentation; and
- Loans to micro-entrepreneurs (maximum amount: 50 minimum wages) and financing to microcredit institutions.

**General metrics.** In terms of access to credit, 62% (1 million) out of a total of 1.6 million companies with a MSME certificate had financing in the BFS as of June 2023,<sup>80</sup> whereas this ratio drops to 48% when considering the number of companies surveyed in the 2020-2021 National

<sup>78</sup> [Law No. 26,739](#) (dated March 28, 2012) amended the BCRA's Charter and established that the Board may "set differentiated policies aimed at small- and medium-sized enterprises and regional economies" (see Section 7 of said regulation). Over the years, the BCRA has implemented various specific regulations for this segment of companies, such as the Credit Line for Productive Investment (*Línea de Crédito para la Inversión Productiva*, [Comm. A 5319](#) dated July 5, 2012), Credit Line for Production and Financial Inclusion (*Línea de Financiamiento para la Producción y la Inclusión Financiera*, [Comm. A 5874](#) dated December 12, 2015) and, more recently, a new credit line for productive investment (*Línea de Financiamiento para la Inversión Productiva*). In turn, the regulation on reciprocal guarantee companies (SGRs) dates back to 1995 ([Law No. 24,467](#), March 1995), and the BCRA regulatory framework dates back to 1996 ([Comm. A 2411](#) dated January 26, 1996). There is also regulation on credit to MSMEs before 1993. For example, Escudé et al. (2001) point out that, until 1993, the BCRA set loan quotas that commercial banks were required to allocate to MSMEs (MSMEs and the credit market in Argentina ("Las MiPyMES y el mercado de crédito en la Argentina"), Working Paper No. 15, BCRA, July 2001).

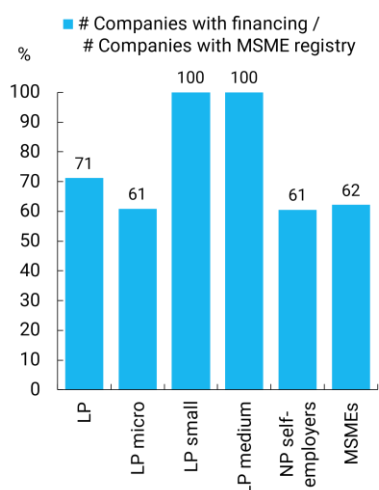
<sup>79</sup> Under the LFIP, there were six financing quotas: (1) *quota 1*: October 2020 to March 2021; (2) *quota 2*: April 2021 to September 2021; (3) *quota 3*: October 2021 to March 2022; (4) *quota 4*: April 2022 to September 2022; (5) *quota 5*: October 2022 to March 2023; (6) *quota 6*: April 2023 to September 2023.

<sup>80</sup> It refers to companies with valid MSME registry as of June 30, 2023 ([Datasets - MSME Registry](#)).

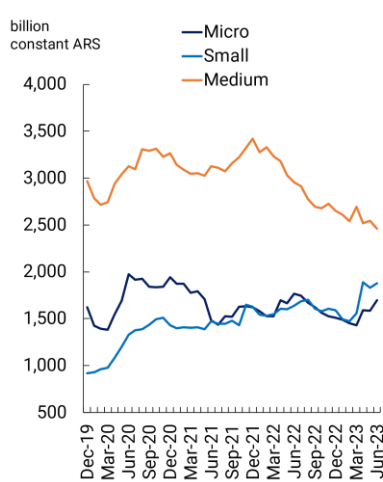
Economic Census<sup>81</sup> (CNE 20-21) as a reference. Small- and medium-sized enterprises recorded much higher levels of access to credit within the BFS compared to micro enterprises, regardless of their legal form (NP or LP). It should be mentioned that small- and medium-sized enterprises established as LPs had full access to financing (without considering the amount). These results are in line with various studies indicating that the size of the company is positively associated with the level of indebtedness.<sup>82</sup>

## Chart 20 | Benchmark on financing to MSMEs

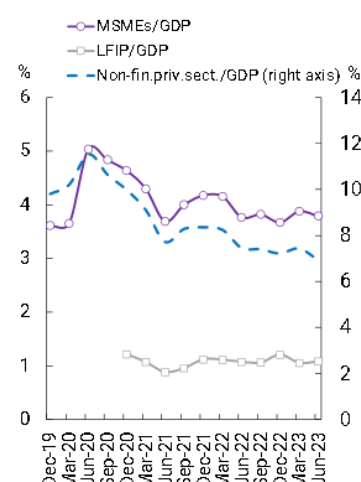
MSMEs with credit (June-23)



Stock of credit



Stock of credit vs. GDP



Note | GDP ratios are calculated by considering: (i) numerator: last month of the quarter; and (ii) denominator: GDP of the quarter.

Source | Datasets by the Secretariat of Industry and Productive Development, INDEC and BCRA.

Also, credit from the BFS to MSMEs performed better than credit to the SPNF once the critical period of the COVID-19 pandemic was overcome. The evolution of financing from late 2019 by company size shows, at least, three differentiated performances.<sup>83</sup> Firstly, financing stocks increased at the beginning of the COVID-19 pandemic for all three sizes of companies—micro, small, and medium—and remained virtually stable until late 2020. Secondly, small companies showed a growing trend in financing stocks over the past few years. Lastly, micro and medium-sized enterprises reduced the stocks of credit starting in 2022, although micro companies exhibited a recovery on the margin.

The difference between lending to the SPNF and to MSMEs is influenced by specific regulations aimed at channeling financing to the MSME sector. It should be noted that financing to MSMEs

<sup>81</sup> The set of MSMEs has been estimated by subtracting the total number of non-profit organizations (76,084) and large for-profit companies other than MSMEs (3,051) from the total number of economic units (2,189,472). This adjustment is made because non-profit organizations are not eligible companies to obtain an MSME Certificate, and large for-profit companies fall outside the scope MSMEs. It is worth noting that the classification criteria for MSMEs (micro, small, and medium) are not symmetrical with the CNE and the MSME Certificate. The CNE classifies them on the basis of the number of employees, while the MSME Certificate considers the annual turnover.

<sup>82</sup> Villar, L. (2020) in Companies' Financing Structure in Argentina: Influence of the Company Size and the Sector it Belongs to, LV AAEP Meeting.

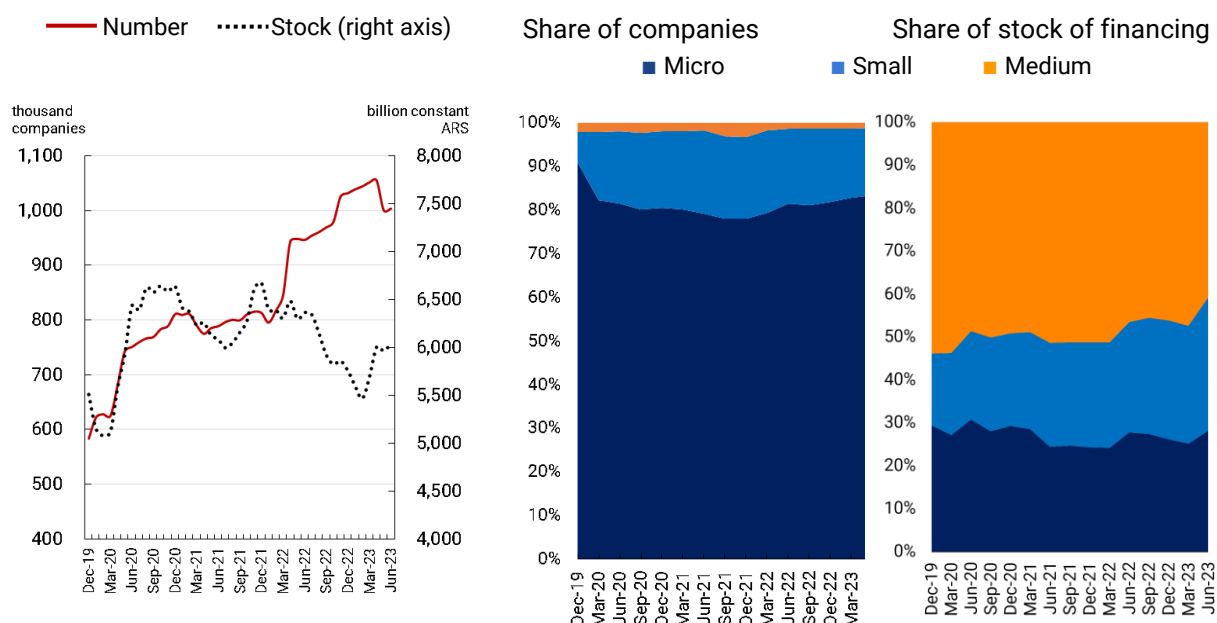
<sup>83</sup> The stocks mentioned in the Credit to Productive Units section include financing in domestic and foreign currency, and are expressed at constant prices (CPI June-23 = base 100).



through specific credit lines partially absorbs funds from deposits. For every ARS100 that financial institutions can lend, a minimum of about ARS10.7 must be allocated to MSMEs.<sup>84</sup>

The number of MSMEs with financing in the BFS reached 1 million as of June 2023, showing a net increase of around 57 thousand productive units compared to June 2022. The distribution by size indicates that micro enterprises accounted for over 83% of MSMEs with credit in the BFS. Out of this share, 73 p.p. (715,000 companies) are MSMEs owned by NPs.

**Chart 21 | MSMEs with financing in the BFS**



Source | BCRA.

Also, the stock of financing of MSMEs in the BFS reached ARS6 trillion in June 2023, indicating a decline of 5.1% y.o.y. at constant values.<sup>85</sup> Medium companies concentrated the largest share in the total stock of financing. Additionally, small companies played a significant role as they recorded a substantial increase in their share in the total stocks of financing.<sup>86</sup>

**Credit assistance.** The financing of MSMEs in the BFS is primarily linked to short-term credit lines for working capital. The share of working capital in total financing climbed from 49% in January 2019 to 65% in June 2023. Conversely, financings of higher amounts and longer terms have been losing ground in favor of shorter-term and smaller-amount credits.

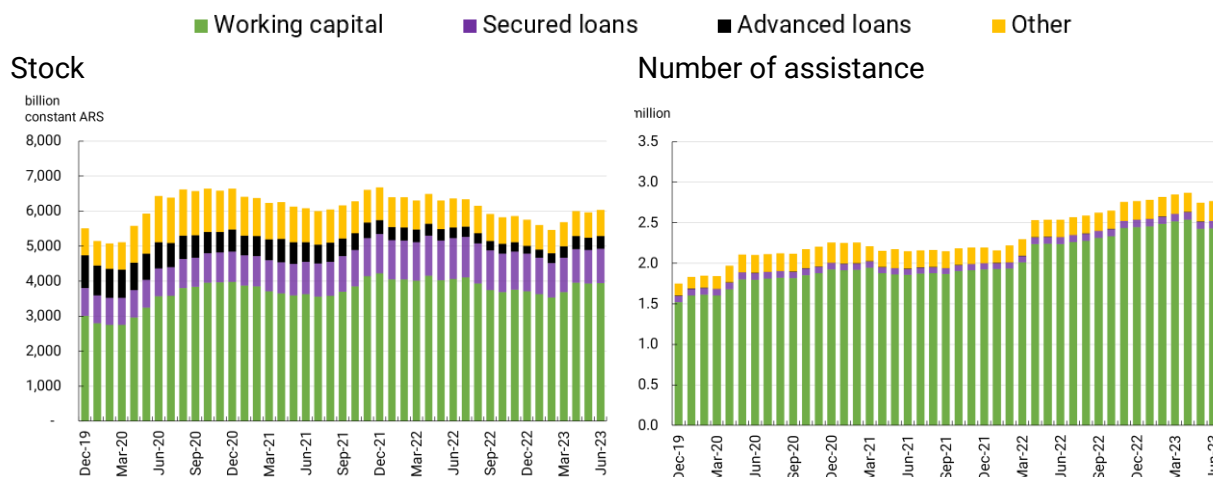
<sup>84</sup> The minimum cash requirements are around 30%. Out of every ARS100 in deposits, ARS70 can be lent, of which ARS7.5 must be allocated to MSMEs. Therefore, the effective allocation is around 10.7%.

<sup>85</sup> Amounts are expressed at constant prices of June 2023 (CPI, INDEC, June 2023 = 100).

<sup>86</sup> Monthly average in 2019: 18.6% vs. average over the last 12 months: 28.2%.



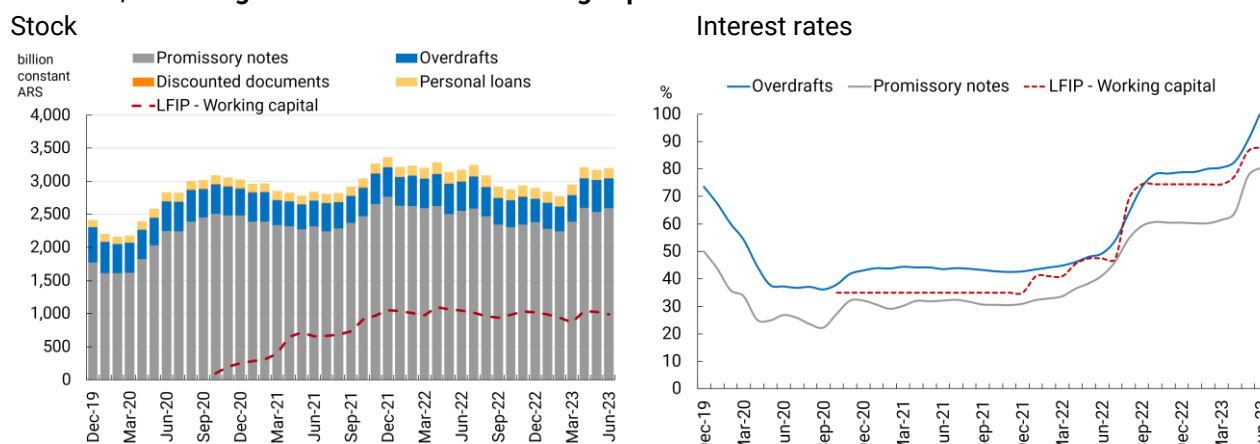
**Chart 22 | MSMEs' financing by assistance group<sup>87</sup>**



Source | BCRA.

The use of financing through promissory notes (unsecured, discounted, and purchased) predominates throughout the series as the most significant assistance in terms of stock. MSMEs' preference for this type of credit is explained by the dynamics of its interest rate. Throughout the series, the interest rate on promissory notes is below other financing alternatives. Additionally, the LFIP influences the dynamics of the interest rate on promissory notes as it establishes an interest rate cap for working capital financing, a significant portion of which is channeled through promissory notes.

**Chart 23 | Financing to MSMEs aimed at working capital net of credit card**



Source | BCRA.

**Financing under the LFIP.** The stock of financings granted through the LFIP reached about ARS1,721 billion in June 2023<sup>88</sup> (around 28.5% of the total financing stock for MSMEs). The number of companies and stock of financing under the LFIP is distributed by size similarly to the

<sup>87</sup> "Working capital" includes advances, personal loans, credit cards, promissory notes, and discounted documents; "Secured loans" include pledge and mortgage loans; "Advanced loans" include foreign trade lines, corporate bonds and financial trusts securities. The classification by assistance group excludes assistance with code '99'.

<sup>88</sup> This includes the stock granted to non-MSMEs under the LFIP.

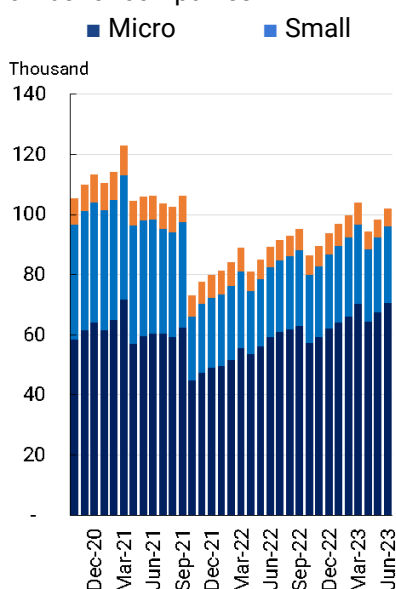
overall financing of the BFS. More than 50% of the stock of financing was granted to medium companies,<sup>89</sup> while the largest number of companies were micro and small.

LFIP's share in total financing within the BFS may serve to gauge the impact of the LFIP in terms of financial inclusion. The relative weight of credit through the LFIP was more significant in small and medium enterprises than in micro enterprises. However, in the case of micro enterprises, this proportion increased from 12.4% in October 2020 to 17.4% in June 2023, recording the highest growth across the three sizes. In general terms, a small portion of financing to micro enterprises enjoys favorable conditions in terms of the cost of financing offered by the LFIP.

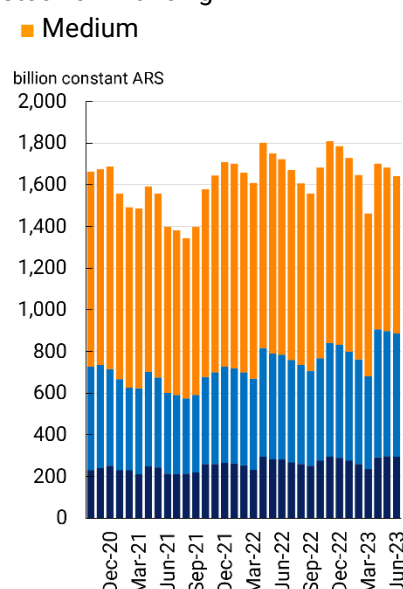
The low share of the LFIP in the total credit for micro enterprises could stem from the intensive use of credit cards as a means of financing,<sup>90</sup> which cannot channel credit through the LFIP. On the other hand, credit products used for channeling financing through the LFIP, such as the discounted documents and personal loans, are used by a limited number of micro enterprises, limiting the impact of the LFIP on the total stock of credit.

**Chart 24 | MSMEs and other companies with financing under the LFIP**

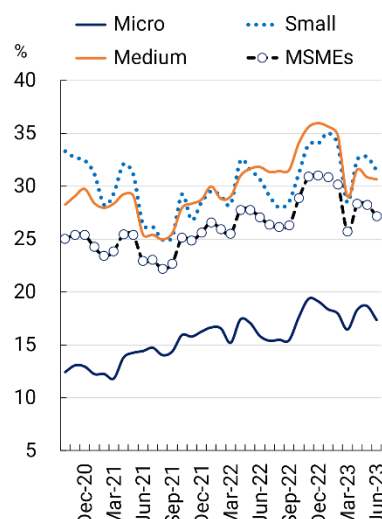
Number of companies<sup>91</sup>



Stock of financing



Share of LFIP in total stock of financing



Source | BCRA.

<sup>89</sup> Series average: 53%.

<sup>90</sup> See Table 5 in the IIF of April 2023.

<sup>91</sup> The decline in the number of companies between the end of quota 2 (September 2021) and the beginning of quota 3 (October 2021) was concentrated in micro and small enterprises, owned by NPs and by LPs. In such period, a relaxation of social distancing measures began and, consequently, economic activity has returned to normalcy. This factor could have influenced the decision not to renew financing.

## Exhibit 1 / Digitalization, Pandemic and Account Opening: Exploring Access to Financial Services by the Young

As stated in the previous IIF, the number of people with bank and/or payment accounts rose 27%, from 27.6 million in March 2019 to 35.1 million in December 2022. The 15-19 age group contributed the most (6 p.p.) to this rise, followed by the 20-24 age group, which contributed nearly 3.5 p.p.

Considering the behavior of young people, it is reasonable to wonder: do they behave differently from adults when they become financial consumers? Do their characteristics and the context influence their behavior?

The answer to these questions entails additional challenges inherent in the observation window. Between 2019 and 2022, there were two significant processes which were related, though different. There was a structural process, which accelerated: the use of technology to access financial services. The other process was temporary, but had an enormous impact—the COVID-19 pandemic.

This exhibit summarizes the major findings of the research conducted by the BCRA's Financial Inclusion Senior Management Office, which explores potential answers to the above challenges. Econometric models were developed with "time to an event" data at individual level, on the basis of an observation window that ran from the first quarter of 2019 to the fourth quarter of 2022.<sup>92</sup>

The variable seeks to explain the amount of "time" that elapses until a person opens an account, whether at a FI or a PSP that offers payment accounts. One of the variables provided by these models is the cumulative probability of the population without an account continuing without one or, complementarily, starting to have one. Using stratified representative random samples of people aged 13-85, methodologies that are frequently used in time-to-event studies are applied. These are the tools of choice when the answer to "why" entails answering "when" in the first place.<sup>93</sup>

There are two conditioning factors to identify the time (t) analyzed: 1) the observation window, and 2) the legal age to access the financial service. This is the reason why we have chosen two definitions of t=0. In the first instrumentation, t=0 was the first calendar quarter for which information was available (first quarter of 2019). In the second instrumentation, t=0 was the time when a person was about to turn 13 to open an account. In both cases, time will run in quarters (given the nature of the available data) but with a different meaning in each case.

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<sup>92</sup> In the event-history analysis, both nonparametric descriptive models and semiparametric transition rate models are usually used. The research used both: first, the nonparametric method by Kaplan and Meier, and second, the semiparametric model by Cox.

<sup>93</sup> Kaplan, E. L., and P. Meier. 1958. Nonparametric estimation from incomplete observations. *Journal of the American Statistical Association* 53: 457–481, Cox, D. R. 1972. Regression models and life-tables (with discussion). *Journal of the Royal Statistical Society, Series B* 34: 187–220. Cox, D. R. 1975. Partial likelihood. *Biometrika* 62: 269–276.

Consequently, the “time” variable has two meanings based on the proposed analysis. In the first case, it is the calendar time (quarters between 2019 and 2022), whereas the second one represents people's age, from 13 to 16 years.<sup>94</sup> The evolution of time under analysis thus refers to the passage of chronological time first. Therefore, two people at  $t$  coincide in time but may have different characteristics, such as their age.<sup>95</sup> In the second case, two people at  $t$  will be the same age, but they may have turned that age at different points in the calendar time.

Therefore, this exhibit comprises two types of samples. One of them includes all the people that were 13 or more in the first quarter of 2019, had no account of the type (bank/or payment account) offered by the provider in question, and were up to age 85 by the time the first account was opened. The second one includes people aged 13-16 between 2019 and 2022 who had no account with the account provider in question in the first quarter of 2019.

### **Account Uptake by the Population in General**

Nonparametric survival models provide the following results:

- Account uptake by the population is not consistent over time. For example, events such as the COVID-19 pandemic had a positive impact. More recently, the probability of account opening rose once again between the first and third quarter of 2022.
- A four-year period is not enough for all the people without an account to start having one, but the majority was financially included in terms of account holding.
- During the COVID-19 pandemic accounts were mainly opened with FIs. No significant differences were observed between public and private institutions.<sup>96</sup> In turn, PSP account uptake during the COVID-19 pandemic was not an isolated event but a process that took place over time.

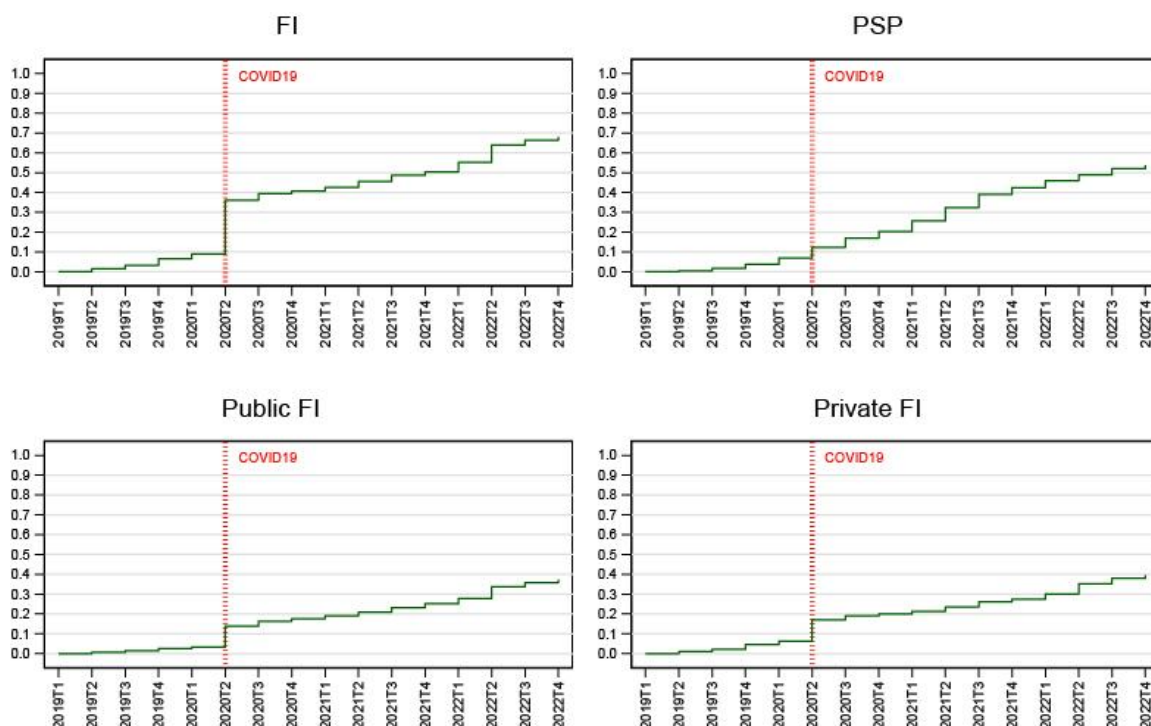
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<sup>94</sup> Follow-up is conducted up to age 16, as there is a four-year observation window: starting at age 13, and finishing when the person turns 17.

<sup>95</sup> The set of variables whose incidence was explored includes the following information: whether the account was opened at a FI (whether public or private) or at a PSP; certain characteristics of the municipality where the person opening the account lives (population above or below 10,000 inhabitants, availability of branches or ATMs, whether public or private); and features of the person (such as gender and age).

<sup>96</sup> Account opening was also boosted by public policies adopted to deal with the drop in self-employed workers' income.

**Chart A.1.1. | Uptake curves by group of institutions**



Note | Sample: No 2019Q1 and 13 or more in 2019Q1 up to age 85 first account opened. Time analyzed: quarter – Uptake curve (Kaplan-Meier failure). Uptake curves show the cumulative probability of people without an account at the beginning of the first quarter of 2019 having an account in the following periods.

Source | Own estimations based on COELSA's data.

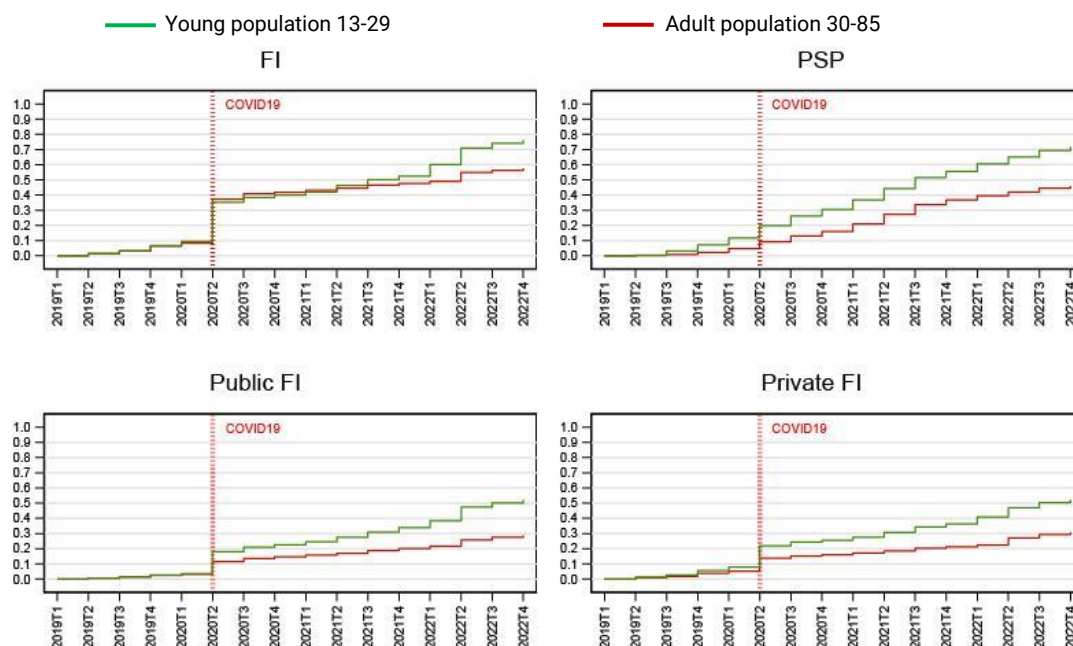
### Exploring the Behavior of Young People and Teenagers

The previous results are more evident when segregating the population into groups; first, into “young” (aged 13-29) and “adult” people (aged 30-85) and, second, into “teenage” (aged 13-16) and “mature” people (aged 17-85).

- Upon breaking down this information by age, mature people and, to a lesser extent, young people, drove account uptake at FIs at the onset of the COVID-19 pandemic, whereas the uptake by teenagers was more recent (from 2022).
- In the case of PSPs, uptake was gradual, though higher among young people and teenagers than in adult or mature people across all quarters.
- These results suggest that population groups behave differently. These hypotheses were statistically tested using a log-rank test.<sup>97</sup> The hypothesis of identical behavior was rejected.

<sup>97</sup> Hypothesis testing was used.

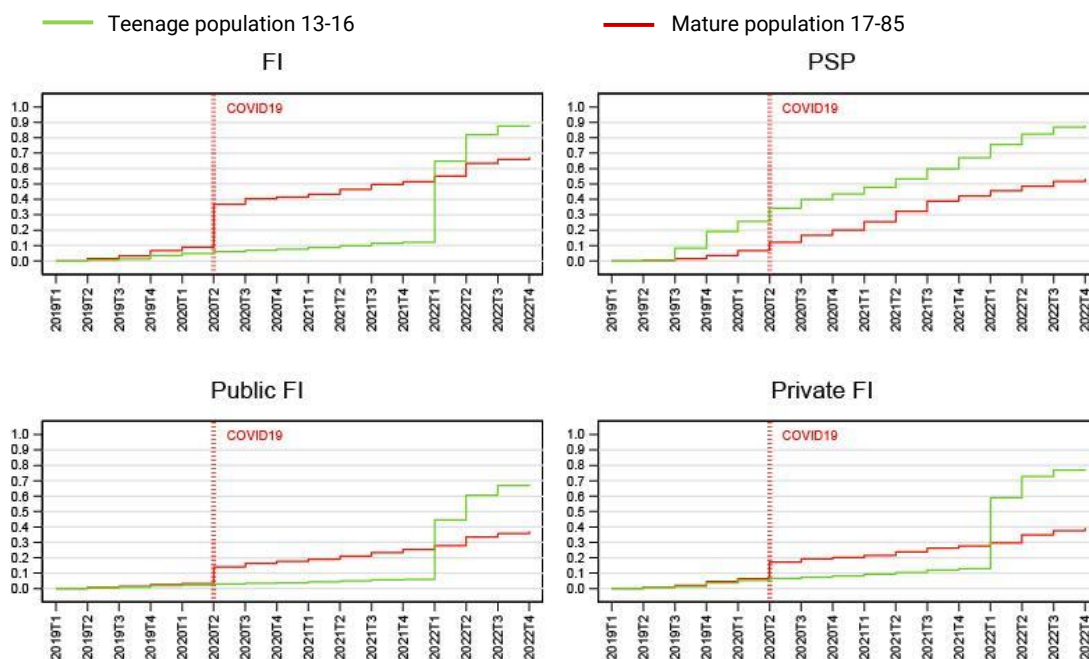
**Chart A.1.2. | Uptake curves by age group (young vs. adult people)**



Note | Sample: No 2019Q1 and 13 or more in 2019Q1 up to age 85 first account opened. Time analyzed: quarter – Uptake curve (Kaplan-Meier failure). Uptake curves show the cumulative probability of people without an account at the beginning of the first quarter of 2019 having an account in the following periods.

Source | Own estimations based on COELSA's data.

**Chart A.1.3. | Uptake curves by age group (teenage vs. mature people)**



Note | Sample: No 2019Q1 and 13 or more in 2019Q1 up to age 85 first account opened. Time analyzed: quarter – Uptake curve (Kaplan-Meier failure). Uptake curves show the cumulative probability of people without an account at the beginning of the first quarter of 2019 having an account in the following periods.

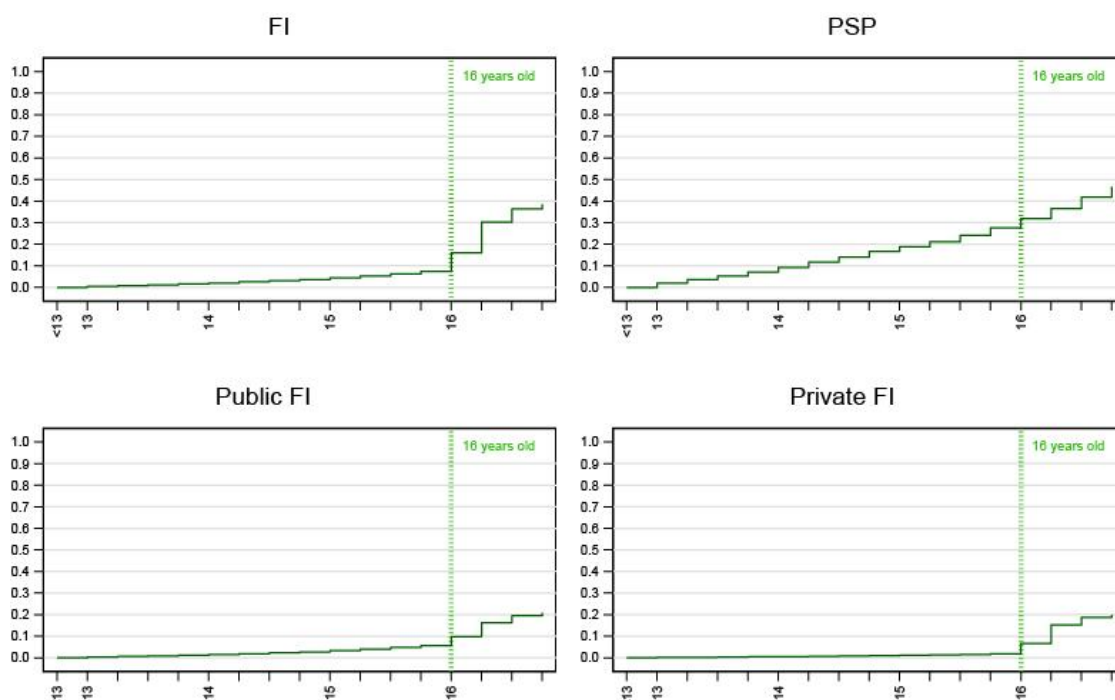
Source | Own estimations based on COELSA's data.

### Account Uptake by Teenagers' Age

The second type of sample used for estimations indicate that bank account uptake by teenagers mainly starts at age 16. In contrast, uptake is earlier and gradual in the case of payment accounts, and tends to rise as age increases.

At the same age, uptake by teenagers is higher in PSPs than in FIs. These differences may be attributed to the young's preference for payment accounts and to the fact that FIs started offering electronically-opened accounts for teenagers at a later stage.

**Chart A.1.4. | Uptake curves by teenagers' age**



Note || Sample: Age 13-16, first account. Time analyzed: age – Uptake curve (Kaplan-Meier failure). Uptake curves show the cumulative probability that people with legal age to hold an account (13 years) could have an account as age increases. The maximum follow-up age of these set of people is less than 17 years because of the time range of the database (2019-2022). Source | Own estimations based on COELSA's data.

### Semiparametric Cox Models with Variable Coefficients over Time

In addition to Kaplan and Meier's nonparametric models, Cox model estimations with variable coefficients over time are used, offering some key relative advantages, such as the inclusion of multiple explanatory variables, to accommodate the violation of the proportional hazard assumption and the possibility of carrying out simulations with the estimated parameters to differentiate potential causes and incentives for account opening.

Both nonparametric and semiparametric models with their relevant tests have led to the following conclusion:

- Young people show a different behavior compared to adult people, as revealed by the rate of account opening, which is actually more significant.

- Teenagers show a different behavior compared to mature people, as revealed by the rate of account opening, which is actually more significant both at PSPs and at FIs, though with certain time lag.
- The characteristics of the account provider play a pivotal role in the opening of accounts. Although the processes observed with the different types of providers share certain characteristics, such as being ascending, certain other aspects tell them apart, such as the upper limit reached and the leap resulting from the impact of the COVID-19 pandemic.
- The evidence obtained from the estimation of models of behavior and the simulations with the estimated parameters reveals the differences between the impact of technology and the effect of the COVID-19 pandemic.
- The pandemic had a greater bearing on men in respect of FIs, which could be attributed to the emergency aid programs implemented, but the subsequent dynamic brought women closer to men, especially in public banks. As for PSPs, women start behind compared to men, but the process is reversed at the end of the observation window.
- There are differences in the opening patterns depending on the type of account provider. There is a “trend” dynamic typical of PSPs and another dynamic related to a specific event, typical of FIs as a result of their reaction to the pandemic and the adoption of measures to facilitate access to accounts by the end of the observation window.
- There is a “critical” age around 16 for the opening of bank accounts.
- Despite the emergence of “digital/virtual” features for opening and using bank and payment accounts, the “territorial” characteristics still seem to play a significant role in the opening of accounts.
- Contrary to the belief that PSPs’ actions focus on the financial inclusion of people living in small communities, the evidence indicates that, in terms of timing, this is done by FIs, whereas PSPs stand out in municipalities with a greater number of people aged 15 and more. The opening of accounts at PSPs by younger people mostly takes place in municipalities which already have bank infrastructure, whether public or private.

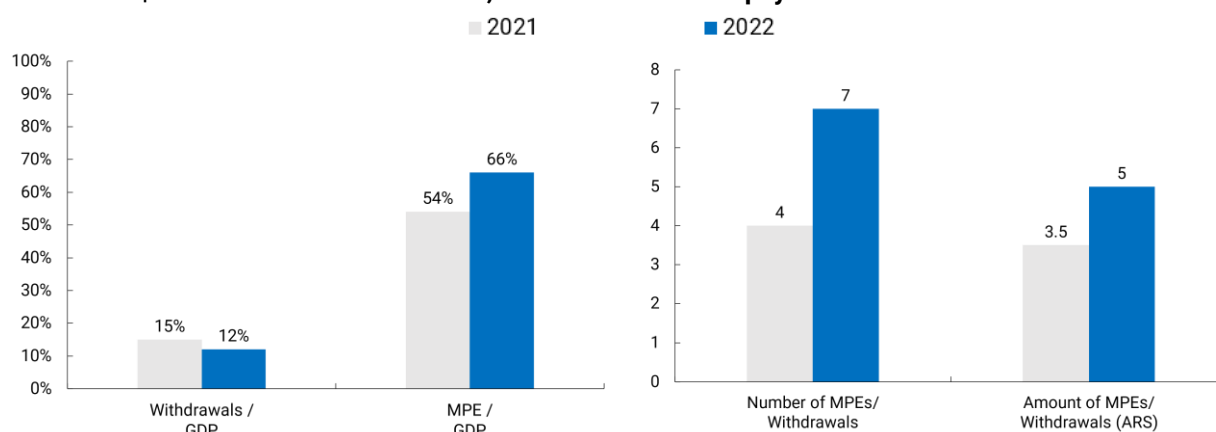


## Exhibit 2 / Dynamics of Cash Withdrawals and Financial Inclusion

The acceleration of digital payments in Argentina has consolidated. However, cash continues to be a relevant means of payment for everyday use. This also occurs in other economies of the world, such as those of the euro area.<sup>98</sup> So how has the use of cash unfolded recently in Argentina?

Sixty-three point five percent (63.5%) of people reported making frequent use of cash for their daily purchases, as revealed by a survey conducted by the end of 2022.<sup>99</sup> In turn, 69.4% of the households' expenditure was made in cash according to a pre-pandemic survey (2017-2018).<sup>100</sup> Both figures paint a picture of the daily use of cash as a payment method across different points in time.

**Chart A.2.1 | Ratios for cash withdrawals, electronic means of payment and GDP**



Note | "Withdrawals": cash withdrawals; "MPE": electronic means of payment. Amount for each year in current terms.  
Source | BCRA and INDEC.

At the same time, the amount—in real terms—of cash withdrawals from ATMs—proxy for the use of cash as a means of payment<sup>101</sup>—fell 23% in 2022. This is reasonable enough bearing in mind the increase in the amount—at constant prices—of MPEs (+25% y.o.y.). In addition, the share of cash amounts withdrawn in the total output shrank 3 p.p. between 2021 and 2022 (from 15% to 12%). MPEs as a share of GDP rose from 54% to 66% in the same period. In terms of the population, in 2022 each adult made on average more electronic payments for every cash withdrawal per month than in 2021 (7 vs. 4, respectively). A similar situation was seen in terms of real amounts (ARS5 vs. ARS3.5 for every peso withdrawn, respectively). This means that on average Argentinians are increasingly replacing cash with MPEs.

<sup>98</sup> Although electronic payments have advanced, cash remains to be the main means of payment. In 2022, 59% of transactions carried out at points of sale were paid in cash in the euro area. In Italy, Spain and Germany, these figures reached 69%, 66% and 63%, respectively. [Bank of Spain \(2023\)](#) and [European Central Bank \(2022\)](#).

<sup>99</sup> The survey displays three types of answers on the use of cash: (a) frequently used, (b) hardly ever used, and (c) not used. First Report on Loans, Genders, and Caregiving in Argentina. Working team of the ECLAC and the Argentine Ministry of Economy. 2023.

<sup>100</sup> National Survey on Households' Expenses 2017-2018. Report on Incomes. INDEC. June 2020.

<sup>101</sup> According to [Khiaonarong and Humphrey \(2022\)](#), the value of cash withdrawals is a proxy for the use of cash as a means of payment.

In short, cash remains relevant for daily payments but may be losing ground to digital payments. Now, is this trend observed in the entire population? Or are there different behaviors in terms of the different population groups (groups I, II, III and IV<sup>102</sup>)?

There are dissimilar attitudes as to the use of cash depending on the income level and type of labor income (registered or non-registered)<sup>103</sup> as observed in the results of the surveys. Cash use (a) increases as income level decreases, and (b) is lower among registered workers.

This behavior is observed when analyzing the information on cash withdrawals collected by the BCRA. Using these data,<sup>104</sup> classified based on the degree of development of the physical financial infrastructure of municipalities, inhabitants can be grouped into four sets based on the following attributes: (a) number of people who get paid through a salary account (proxy for registered workers); (b) amount of wages collected through a salary account (proxy for the income of registered workers) and (c) activity of bank and/or payment account holders,<sup>105</sup> among others.

**Table A.2.1 | Characteristics of population groups**

Variables	Group I	Group II	Group III	Group IV
<b>Labor income and market</b>				
Average pay per registered worker (*)	478,243	399,312	352,715	324,560
Registered workers in terms of the adult population (*)	36%	24%	26%	25%
<b>Cash use and account activity</b>				
Cash withdrawals over payroll of registered workers (*)	28%	37%	56%	46%
Account holders with activity	55%	53%	43%	39%
<b>Physical and digital infrastructure</b>				
ATMs every 10,000 adults	8.0	4.6	5.7	4.7
Share of the population with both connections	100%	99%	96%	76%

Note | Data as of December 2022, except for digital infrastructure (August 2022) and for account holders with activity (fourth quarter of 2022). (\*) In this table, the term "registered worker" is used for people who get paid through a salary account, and "payroll of registered workers" is the sum of wages paid to those workers. Account holders with activity: Percentage of account holders with at least one debit. Population groups (I-IV): based on regulations, municipalities in Argentina are divided into six categories depending on the financial physical infrastructure and certain financial development indices (from I to VI, from greater to smaller infrastructure). The data on cash withdrawals are presented in four groups because the last three categories (IV-VI) have been joined in one set. The unit of analysis is thus the population from the municipalities of each group. Amounts at constant prices of June 2023 (CPI June 2023 = 100).

Source | BCRA, COELSA, ENACOM and INDEC.

<sup>102</sup> According to prudential regulations, municipalities in Argentina are divided into six categories depending on the financial physical infrastructure and certain financial development indices (from I to VI, from greater to smaller financial infrastructure/development). The data on cash withdrawals are displayed in four groups because the last three categories (IV-VI) have turned into one.

<sup>103</sup> There could also be dissimilar behaviors derived from other characteristics, such as age, education and digital skills. Based on the information available, this exhibit analyzes variables related to the formal labor market and the level of formal income.

<sup>104</sup> Information available for the quarters from June 2021 to December 2022.

<sup>105</sup> The activity of account holders measures the share of account holders whose accounts recorded at least one transaction in a quarter. These transactions include debits made through instant transfers, online payments by transfer, transactions with checks and direct debits, all of them settled by COELSA. This indicator may be underestimated as some transactions, such as debit card payments and transfers not settled by COELSA, are not included.

The analysis of data confirms the trends found in individual surveys in relation to income level and type (although in this case the available data only include formal labor income of those who get paid through a salary account):

- (a) As the average wage per salary account holder increases (proxy for registered worker) in the population group, the share of cash withdrawals in the formal wage tends to fall, while the activity of bank and/or payment account holders increases.
- (b) In population groups with a lower share of salary account holders (proxy for registered workers) a higher percentage of cash withdrawals with respect to formal wage is observed, along with lower activity by bank and/or payment account holders.
- (c) The differences in population groups for the analyzed variables remain the same in all the quarters from June 2021 to December 2022.

Other factors, such as the physical and digital financial infrastructures, may also drive dissimilar attitudes towards cash management. For example, greater access to withdrawal points (ATMs, stores where cash withdrawal is available, supplementary agencies of financial services -ACSFs-, etc.) means that a person does not need to withdraw significant amounts as a precaution and usually withdraws money more often but for lower amounts. Particularly, population group I reports a lower withdrawal rate in relation to formal wage and has a higher number of ATMs available per adult. Moreover, the development of a digital payment network relies on the existence of a sound system for internet connection, which naturally affects consumers and merchants. The population with access to both connection types (fixed and mobile) affects the potential of digital financial services. Although there is not a big difference in most groups, in group IV a fourth of the population lives in municipalities that do not offer both types of connection. Apart from this, connection quality (e.g., browsing speed) should be evaluated to determine the potential for actual development of the digital infrastructure.<sup>106</sup>

As previously stated, withdrawn amounts have generally fallen as MPEs have advanced. Another question is whether the decrease in cash use has occurred across all population groups and, if so, to what extent.

First, cash withdrawals at constant prices declined in the four population groups considering bank and/or payment account holders and in respect of formal wage received in a salary account at constant prices (for all y.o.y. and accumulated changes in the period analyzed). The use of cash decreased across all population groups, regardless of the income level and type, and of the availability of physical and digital infrastructure.

Second, the decrease rate was not similar across population groups.

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<sup>106</sup> See Digital Infrastructure in Section 1 of this report.

**Table A.2.2 | Decrease of cash withdrawals**

Y.o.y. change	Cash withdrawals per account holder				Cash withdrawals / payroll of registered workers (*)			
	Group I	Group II	Group III	Group IV	Group I	Group II	Group III	Group IV
Jun-22 vs. Jun-21	-27%	-6%	-3%	-2%	-29%	-8%	-7%	-6%
Sep-22 vs. Sep-21	-37%	-20%	-21%	-21%	-38%	-18%	-19%	-19%
Dec-22 vs. Dec-21	-30%	-27%	-23%	-23%	-37%	-33%	-28%	-28%
<b>Dec-22-Jun-21 change</b>	<b>-36%</b>	<b>-18%</b>	<b>-15%</b>	<b>-14%</b>	<b>-52%</b>	<b>-41%</b>	<b>-39%</b>	<b>-38%</b>

Note | Y.o.y. changes in amounts stated at constant prices of June 2023 (CPI June 2023 = 100). (\*) In this table, the term "registered worker" is used for people who get paid through a salary account, and "payroll of registered workers" is the sum of wages paid to those workers.

Source | BCRA and COELSA.

Cash withdrawals—at constant prices—in group I, which has the relatively highest average wage per registered worker and the highest share of formal workers (who get paid through the salary account), posted a larger drop than the other population groups both in terms of bank and/or payment account holders and in respect of real formal wage (for all y.o.y. and accumulated changes in the period analyzed). It could be said that the drop in the use of cash (and its substitution for electronic payments) occurred at a faster pace in the population set with a higher rate of registered workers (salary account holders), the highest formal wage and best access to physical infrastructure.

To conclude, the analysis of data on cash withdrawals from ATMs collected by the BCRA and segmented into population groups: (1) confirms the existence of dissimilar behaviors as to the handling of cash depending on the level and type of labor income (formal/informal), (2) reveals that, despite that, in recent times the fall in cash constitutes a phenomenon that is verified throughout all population groups, regardless of their income conditions and the physical and digital financial infrastructure, and (3) shows that this trend was more pronounced among people with higher income, higher rate of registered work and better access to physical infrastructure.

Digital payments are the gateway to the financial system as people may access other services such as saving and/or financing. On the basis of this premise, the analysis shows in which population groups financial inclusion is expected to be higher/lower—which is the other side of the development of cash use—and what challenges could be addressed to reach universal use of financial services.

Other characteristics about which no information is available, such as digital skills, behavior in a vulnerable setting and disruption in the information and communication infrastructure, may also affect behavior. There is evidence for both developed and developing countries. Therefore, although digitalization is being systemically boosted, even in settings with highly digital transactions, transactions in cash and access to face-to-face rendering of services are necessary to facilitate the financial inclusion of people living in distant areas, older people and people with some kind of personal and/or social vulnerability.<sup>107</sup>

<sup>107</sup> See, for example, Alonso, M., E. Gutiérrez, E. Moral-Benito, D. Posada and P. Tello-Casas (2023). [Un repaso de las diversas iniciativas desplegadas a nivel nacional e internacional para hacer frente a los riesgos de exclusión financiera](#), Documento Ocasional N° 2305, Bank of Spain.

# Note on Methodology

## Data on Population

This IIF presents indicators that are disaggregated by demographic and geographic variables. At the time of publication of this edition, the definite results of the 2022 CNPHV have not been issued. For that reason, the data on population used here is based on the 2010 CNPHV.

Given that the INDEC does not release a series that simultaneously contains all the disaggregations used in this IIF (gender, age group, and geographical location for each province, district and municipality), different series were used according to the definition of each indicator:

- in the case of national and provincial indicators, the series known as “Population by Sex and 5-Year Age Groups across the Country and Provinces. Years 2010-2040” was used;
- in the case of district-level indicators, the series known as “Population Estimated as of July 1 of each Calendar Year by Sex at District Level” was used;
- finally, as the INDEC does not publish a projection on the number of inhabitants of each municipality over time, it was necessary to build the series for the indicator based on the results of the 2010 CNPHV.

The indicators in this IIF on the adult population were based on the 2010 CNPHV, and must be taken as provisional data since they are subject to change as under the 2022 CNPHV.

Last, in this IIF, an “adult” is any person aged 15 and older, following the standard used by the World Bank for its financial inclusion indicators.

## Regionalization

This IIF follows the regionalization criterion proposed by the Ministry of Economy and Public Finance (today Ministry of Economy) that sets out five regions, namely:

- NOA region: Salta, Jujuy, Tucumán, Catamarca and Santiago del Estero.
- NEA region: Formosa, Chaco, Misiones and Corrientes.
- New Cuyo: Mendoza, San Juan, San Luis and La Rioja.
- Patagonia: La Pampa, Neuquén, Río Negro, Chubut, Santa Cruz and Tierra del Fuego.
- Center and Buenos Aires: Córdoba, Santa Fe, Entre Ríos, Buenos Aires and the Autonomous City of Buenos Aires.

In this Report, “New Cuyo” is referred to as Cuyo, and “Center and Buenos Aires” as Center.

## Payment Accounts with Payment Service Providers

As for PSPs operating in COELSA, some of them are recorded in the Registry of Payment Service Providers at the BCRA unlike other providers that have not been registered.<sup>108</sup> In this report, only payment accounts of providers registered as PSPs that offer payment accounts are counted.

## Account Activity

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<sup>108</sup> [Consolidated Text on Payment Service Providers](#).

The “activity” series was obtained from COELSA. It indicates whether account holders had any credit or debit in their bank and/or payment accounts in a quarter. If a person conducts transactions from different accounts, either from the same institution or from many of them, they are counted once.

The series distinguishes between credit and debit transactions, and debits and credits from instant transfers, online payments by transfer, transactions with checks, direct debits, DEBINs and bulk (deferred) transfers are included provided they are cleared and settled by COELSA.

Given that the “activity” series takes into account the subset of transactions in which COELSA takes part, activity indicators are underestimated. Particularly, the indicator does not measure account holders that use a debit card and do not transfer funds from or to a payment account, or cash withdrawals, among others. In addition, debit transactions are generally initiated by the NP holding the account, whereas credit transactions are initiated by a third party (LP or NP). Such distinction has different connotations in terms of financial inclusion, as debit transactions are active transactions of NPs.

### **MSMEs’ Credit**

We adopted the MSME criteria proposed by the Ministry of Industry and Productive Development,<sup>109</sup> according to which a MSME is a micro-, small-, or medium-sized enterprise whose economic activity is grouped in any of the following sectors in Argentina: service, business, industrial, agricultural, construction or mining sector. The MSME size is determined on the basis of the economic activity and the amount of total annual sales involved. FIs are to report to the CENDEU the information required in the field “code\_sme”<sup>110</sup> where so set out by the BCRA’s regulations. The field comprises 2 digits: one for the size and the other for the economic sector. We used the “code\_sme” corresponding to the largest amount of credit assistance in each of the periods under analysis since, in some cases, the same company is assigned different “code\_sme” for the same period. The first stock may be equal to the second one; in that case, the highest “code\_sme” is considered. We used the domicile for tax-related purposes registered in the AFIP database to allocate a province to each MSME.

### **NPs’ Stocks of Savings and Investment Products**

NPs’ savings and investment stocks are classified as follows:

1. Stocks of immediate liquidity, which include: (i) balances in current and savings accounts denominated in domestic and foreign currency, (ii) balances in payment accounts and (iii) estimated value of equity of money market funds (MMFs) subscribed by NPs.
2. Stocks of short- and medium-term products, which include: (i) balances in time deposits (TDs) denominated in domestic and foreign currency, (ii) stocks of UVA products and (iii) estimated value of equity of other mutual funds (other MFs) subscribed by NPs. They include fixed return funds (bonds), variable return funds (shares), mixed funds, and structured funds, among others.<sup>111</sup>

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<sup>109</sup> [What is an MSME?](#)

<sup>110</sup> [Determination of the Condition of MSME. Paragraph 1, BCRA.](#)

<sup>111</sup> See [Glossary, CAFCI](#).

The estimated value of the equity of MMFs subscribed by NPs was calculated by adding up: MMFs subscribed through PSPs, exclusive NPs' MMFs in FIs and, for MMFs that may be subscribed by both NPs and legal persons (LPs) in FIs, those corresponding to NPs' MFs were computed on the basis of weights. The calculation of the share of NPs' MFs in total MFs (NP + LP) was used to obtain the weights. The exclusive status was consulted in a website survey and in the regulations on MMF management.

On the other hand, to estimate the equity of other MFs, the difference was calculated between the value of equity of MFs subscribed by NPs (using the "MFs subscribed by NPs" series, published monthly by the Argentine Chamber of Mutual Funds -CAFCI-) and the value of equity of MMFs subscribed by NPs.

### **Cash Dynamics of Cash Withdrawals and Financial Inclusion**

The data on cash withdrawals gathered by the BCRA through the [Monthly Accounting Reporting Regime](#), available for the quarters from June 2021 to December 2022, are classified in categories depending on the level of physical financial infrastructure and the financial development indices of municipalities (I-VI, from greater to less infrastructure/financial development).

The data on cash withdrawals are presented in four groups because the last three categories (IV-VI) have been joined in one set. These four groups can be characterized with the following attributes: (a) number of people who get paid through a salary account (proxy for the number of registered workers); (b) amount of wages collected through a salary account (proxy for the income of registered workers) and (c) activity of bank and/or payment account holders, among others.

# Abbreviations and Acronyms

<b>ACSF</b>	<i>Agencia complementaria de servicios financieros</i> (supplementary agency of financial services)
<b>AFI</b>	Alliance for Financial Inclusion
<b>AFIP</b>	<i>Administración Federal de Ingresos Públicos</i> (Federal Administration of Public Revenue)
<b>APR</b>	Annual percentage rate
<b>ARS</b>	Argentine peso
<b>ATM</b>	Automated teller machine
<b>BCRA</b>	<i>Banco Central de la República Argentina</i> (Central Bank of Argentina)
<b>BFS</b>	Broad financial system
<b>BIS</b>	Bank for International Settlements
<b>BP</b>	<i>Botón de pago</i> (payment button)
<b>BR</b>	Branch
<b>C&amp;O</b>	Companies and organizations
<b>CABA</b>	<i>Ciudad Autónoma de Buenos Aires</i> (Autonomous City of Buenos Aires)
<b>CAFCI</b>	<i>Cámara Argentina de Fondos Comunes de Inversión</i> (Argentine Chamber of Mutual Funds)
<b>CBU</b>	<i>Clave bancaria uniforme</i> (single banking code)
<b>CENDEU</b>	<i>Central de Deudores del Sistema Financiero</i> (Debtors' Database of the Financial System)
<b>CFT</b>	<i>Costo financiero total</i> (total financial cost)
<b>CNE</b>	<i>Censo Nacional Económico</i> (National Economic Census)
<b>CNPHV</b>	<i>Censo Nacional de Población, Hogares y Viviendas</i> (National Census of Population, Households and Housing)
<b>CNV</b>	<i>Comisión Nacional de Valores</i> (National Securities Commission)
<b>COELSA</b>	<i>Cámara Compensadora Electrónica</i>
<b>CPI</b>	Consumer price index
<b>CVU</b>	<i>Clave virtual uniforme</i> (single virtual code)
<b>DC</b>	Debit card
<b>EMAE</b>	<i>Estimador mensual de la actividad económica</i> (monthly economic activity estimator)
<b>ENACOM</b>	<i>Ente Nacional de Comunicaciones</i> (National Communications Authority)
<b>EPH</b>	<i>Encuesta Permanente de Hogares</i> (permanent household survey)
<b>ETCNB</b>	<i>Emisora de tarjetas de crédito no bancarias</i> (non-bank credit card issuer)
<b>FAS</b>	Financial Access Survey
<b>FCEM</b>	<i>Factura de crédito electrónica MiPymes</i> (electronic credit invoice for MSMEs)
<b>FF</b>	<i>Fideicomiso financiero</i> (financial trust)
<b>FI</b>	Financial institution
<b>FS</b>	Financial system
<b>FSB</b>	Financial Stability Board
<b>GDP</b>	Gross domestic product
<b>IIF</b>	Financial Inclusion Report
<b>IMF</b>	International Monetary Fund
<b>INDEC</b>	<i>Instituto Nacional de Estadística y Censos</i> (National Institute of Statistics and Censuses)
<b>ITU</b>	International Telecommunication Union
<b>K</b>	thousand
<b>LFIP</b>	<i>Línea de Financiamiento para la Inversión Productiva</i> (Credit Line for Productive Investment)
<b>LP</b>	Legal person
<b>m</b>	Million
<b>MB</b>	Mobile banking
<b>Mbps</b>	Megabits per second
<b>MF</b>	Mutual fund
<b>MF-NP</b>	Natural persons' mutual fund
<b>MMF</b>	Money market fund
<b>MMF-NP</b>	Natural persons' money market fund
<b>MPE</b>	Electronic Means of Payment
<b>MPOS</b>	Mobile device at point of sale
<b>MSME</b>	Micro-, small- and medium-sized enterprise
<b>NEA</b>	<i>Noreste argentino</i> (northeastern region)
<b>NOA</b>	<i>Noroeste argentino</i> (northwestern region)



<b>NP</b>	Natural person
<b>NW</b>	Net worth
<b>OB</b>	Online banking
<b>ON</b>	<i>Obligación negociable</i> (corporate bond)
<b>OPNFC</b>	<i>Otro proveedor no financiero de crédito</i> (other non-financial credit provider)
<b>p.p.</b>	Percentage point
<b>PCT</b>	<i>Pago con transferencia</i> (payment by transfer)
<b>PDA</b>	<i>Punto de acceso</i> (access point)
<b>PNFC</b>	<i>Proveedor no financiero de crédito</i> (non-financial credit provider)
<b>POS</b>	Device at point of sale
<b>PSP</b>	Payment service provider
<b>QR</b>	Quick response code
<b>SCA</b>	<i>Sistema de circulación abierta</i> (system for open transfer)
<b>SEPyME</b>	<i>Secretaría de la Pequeña y Mediana Empresa y los Emprendedores</i> (Secretariat of Small- and Medium-Sized Enterprises and Entrepreneurs)
<b>SGR</b>	Reciprocal guarantee company ( <i>sociedad de garantía recíproca</i> )
<b>SMVM</b>	<i>Salario mínimo vital y móvil</i> (minimum wage)
<b>SPNF</b>	Non-financial private sector
<b>TAS</b>	<i>Terminal de autoservicio</i> (self-service terminal)
<b>TD</b>	Time deposit
<b>TVI</b>	<i>Tasa de variación interanual</i> (year-on-year change rate)
<b>UVA</b>	<i>Unidad de valor adquisitivo</i> (unit of purchasing power)
<b>y.o.y.</b>	Year-on-year