Financial Stability Report

December 2022

BANCO CENTRAL
DE LA REPÚBLICA ARGENTINA

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Preface

The purpose of the Central Bank of Argentina (BCRA) "is to promote monetary stability, financial stability, employment and economic development with social equity, to the extent of its powers and within the framework of the policies established by the National Government" (Article 3 of the Charter). In general terms, there are financial stability conditions when the financial system as a whole can provide services for financial intermediation, hedging and payments in an adequate, efficient and ongoing manner, even in adverse operating contexts.

For the financial system to contribute to economic development with social equity, financial stability is a priority –by providing adequate means to save, enhancing the possibilities of production and consumption and allocating resources more efficiently—, and the system must be deep and inclusive.

In its regular transactions, the financial system is exposed to different types of risks that the system needs to manage. The interaction among exogenous risk factors, vulnerability sources and elements of resilience defines a specific level of systemic financial risk. Within the context of such interaction, an eventual materialization of the risk factors will result in some impact on the financial system and on the economy at large.

The policies of the BCRA seek to limit systemic risk, preserve stability and promote higher levels of depth and inclusion in the financial system. Thus, the BCRA implements a micro and macroprudential approach tending to limit such vulnerabilities and to enhance the resilience of the system. This includes the continuous monitoring of the financial system's soundness and the exercise of its powers as regulator, supervisor and liquidity provider of last resort.

In this context, the BCRA publishes its Financial Stability Report (IEF) every six months to inform about its assessment of the stability conditions and explain the policy measures implemented to such effect. The IEF is underpinned by the assessment of the domestic and global macroeconomic conditions made in the Monetary Policy Report (IPOM). The Financial Stability Report provides information and analysis to the different agents of the financial system and is designed to be an instrument to encourage public debate on aspects related to financial stability and, especially, on the Central Bank's actions on such matter.

The next issue of the IEF will be published in June 2023.

Autonomous City of Buenos Aires, December 27, 2022.

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For questions or comments, please contact: analisis.financiero@bcra.gob.ar
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About the use of 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 on ideas, feelings, ways of thinking, as well as principles and core values.

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

Executive Summary

During 2022, the Argentine financial system operated on an ongoing basis throughout the year by providing intermediation services of funds and payments. The system has kept moderate risk exposures and has managed to preserve high coverage margins with liquid assets, provisioning and capital.

During the second half of 2022, the Argentine economy exhibited a heterogeneous performance. Despite a better-than-expected growth path in the third quarter, the economic activity would have come to a halt in the last three months of the current year. The expansion pace is expected to moderate in 2023 in the face of a heightened uncertainty in the external front combined with higher chances of global recession risks while, in the domestic front, the country would experience the risks related to electoral processes, high inflation levels and the impact of the drought, among other factors. The international context is increasingly adverse for emerging markets, mainly due to the regularization process of the monetary policy in developed economies after a long period of interest rates at historically low levels. All of the above combines with other pre-existing risk factors such as the persistence of the armed conflict in Ukraine (adding volatility to commodity prices) and the traces of uncertainty about the COVID-19 impact on global growth (with a special focus on the health-related situation in China).

A series of measures were adopted in the country to contain inflation, against a backdrop of widespread rises in the monetary policy interest rates across countries (including both advanced and emerging economies), volatility in currency markets and commodity prices, and a context of economic growth at domestic level. The Central Bank of Argentina (BCRA) continued to raise the monetary policy interest rates until September, in line with the strategy of setting a rate path tending to provide positive returns in real terms on investments in domestic currency and to preserve monetary and exchange stability. These measures supplement the commitment undertaken to control the evolution of monetary aggregates, as well as the interventions (in both the exchange market and the sovereign bonds market in pesos via open market operations) to prevent an excessive financial volatility. Likewise, the BCRA has kept its lending policy aimed at encouraging productive development and renewed the "Credit Line for Productive Investment" (LFIP). Given the tensions observed in the debt markets in pesos and the heightened foreign exchange uncertainty at domestic level by mid-2022, open market operations were carried out, among other measures. On the other hand, new changes were introduced to improve the regulatory framework related to the exchange market due to the current context, thus promoting an efficient use of foreign currencies and the accumulation of international reserves. On the basis of the current scheme of policies and the arrangement with the International Monetary Fund (IMF), a framework of macroeconomic certainty is expected to be consolidated, contributing to reduce expectations on external restrictions and on inflation.

During the period under analysis, the domestic financial markets continued to exhibit a mixed performance. The National Treasury kept getting funds through the domestic market by means of issues in pesos and showed an improvement in the refinancing ratios against the first half of 2022, within a context of increasing nominal interest rates. Two transactions of asset conversion were performed to extend maturities until the end of the year. In turn, the private sector financing through the capital market from July to November did not post significant changes in real terms year-on-year (y.o.y.) but has shown some sort of recovery against the period from February to June.

As regards the operations of the ensemble of financial institutions, the financial intermediation activity contracted slightly —reduction in the stock of loans to the private sector in real terms— against the previous Financial Stability Report (IEF) and in a year-on-year comparison. Within this framework, the Argentine financial system has managed to keep most of its strength features. If any of the risk factors being faced finally held true, the resulting effects should be really very acute —low probability situation— to have a significant impact on the financial stability conditions. Since the publication of the previous IEF by mid-2022, the risks related to the external context have tended to worsen in terms of global growth perspectives, uncertainty level and tightening of the financial conditions for emerging economies (higher interest rates in international markets and dollar appreciation). As stated in previous IEFs, this tightening of the external context is particularly challenging due to the presence of various types of vulnerabilities and risk factors at global level, which might eventually trigger negative evolutions with sudden changes in international markets in terms of flows and prices. All of the above combines with the incidence of some particular domestic factors including climate conditions —with the impact of the drought— or the potential effects of new strains of COVID-19. These eventual scenarios of higher risks might condition the evolution of the domestic economy or create volatility in the financial market, depending on the type of shock faced.

The trade-off between the financial system's potential sources of vulnerability and its strengths has not changed significantly since the publication of the previous Financial Stability Report (IEF) by mid-2022. Nevertheless, there has been a slight rise in hedging levels. In the event of an eventual materialization of an adverse scenario, a systemic response with a high level of resilience is expected to occur.

Particularly, the balance sheet exposure of the financial system to the aggregate credit risk contracted in the last six months, remaining at relatively low levels if compared to the last 15 years. Total lending (to the private and public sectors) stood at 43.9% of the financial system's total assets, going down against the previous IEF mainly due to the performance of the private sector. In parallel, the non-performing ratio of loans to the private sector continued recording a downward trend and stood at 3.1%. The eventual materialization of the risk factors mentioned above might affect the payment capacity of debtors, thus exerting some level of tension on the aggregate balance sheet of the financial system, given its balance sheet exposure. However, the ensemble of financial institutions has managed to keep sizable and growing levels of provisions and capital to face eventual stress episodes.

The performance of financial intermediation activities continues to be another source of potential vulnerability for the ensemble of institutions. Within this framework, the BCRA's lending policy has focused on the most vulnerable sectors, by boosting financing under affordable conditions to micro, small and medium-sized enterprises (MSMEs) via the "Credit Line for Productive Investment" (LFIP). Looking forward, in 2023, the intermediation activity with the private sector has still room to recover momentum, given the higher saving levels in domestic currency observed, particularly due to the positive evolution of traditional time deposits and UVA-denominated deposits. Nevertheless, this context could be adversely affected by any of the risks factors described above. Against this backdrop, the financial system has kept positive profitability ratios and high solvency ratios.

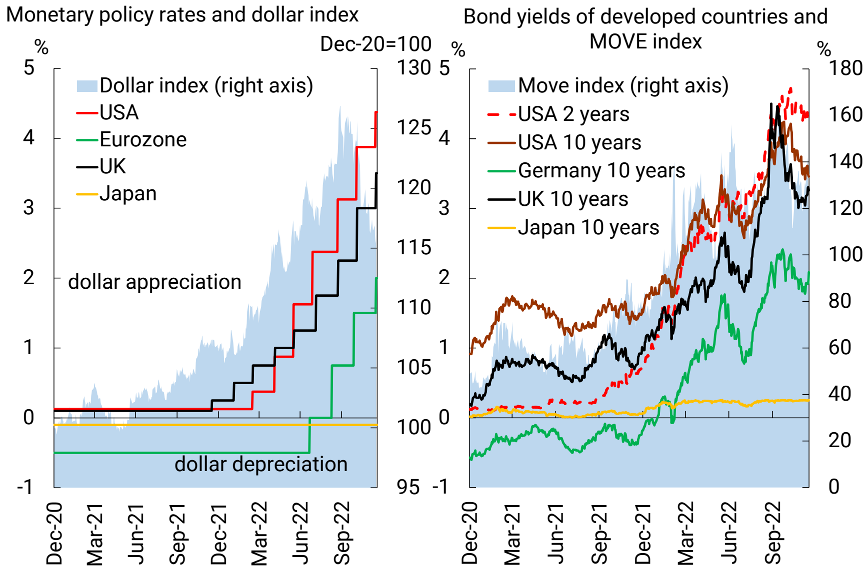
The financial system's ratios of exposure to liquidity risk exhibited a mixed performance against the previous IEF: while the concentration of depositors went up slightly (higher exposure), the funding maturity extended slightly (lower exposure). Forward-looking, an eventual scenario of higher volatility in financial markets or a less dynamic economic activity than originally expected might result in changes in the level or composition of the demand for deposits as well as in challenges for the financial system at large. To counteract these potential effects, the ensemble of institutions has kept sizable liquidity coverage.

All in all, the Argentine financial system starts 2023 with a remarkable level of robustness, underpinned by high solvency and liquidity margins, which would allow for responding with resilience to any eventual stress episode derived from the materialization of the risk factors identified above. The BCRA will continue with its macroprudential monitoring of the financial system and will adopt new policy measures, whenever necessary, to sustain the financial stability conditions

1. International and Local Context

The global context has continued to deteriorate since the publication of the previous Financial Stability Report (IEF), particularly due to the increasingly restrictive bias of the monetary policy worldwide to respond to the rising inflationary pressures in place. The scenario described above is compounded by the uncertainty caused by the continuity of the armed conflict in Ukraine (adding volatility to commodity prices) and by the problems in the global supply chains (resulting from the COVID-19 crisis and still affected, for example, by the pandemic situation in China, which is limiting the activity level). As a result, these factors have been impacting on the economic activity at global level, with heightened risks of recession.[1]

Chart 1 | Interst rates in developed countries and US dollar



Source: BCRA based on Bloomberg.

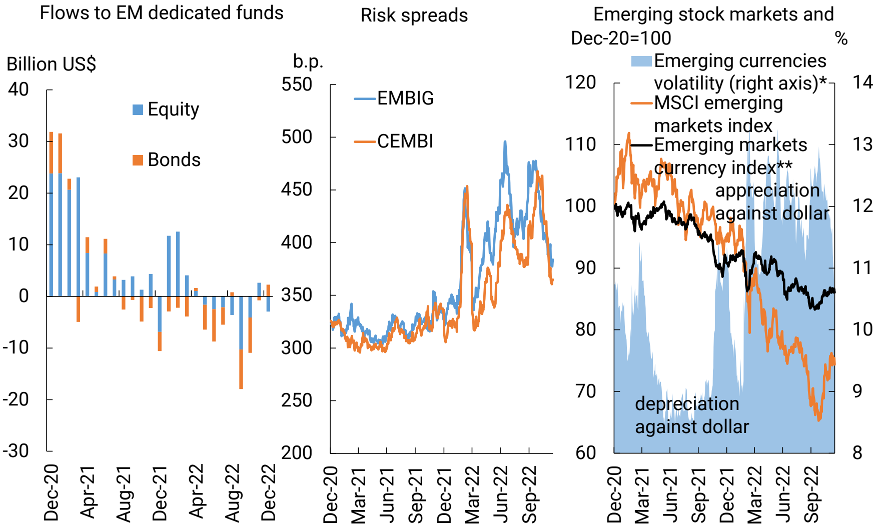
In the specific case of developed economies, the widespread rise of interest rates has accelerated in recent months (see Chart 1). With growing debt yields in these economies, the financial markets are experiencing more adverse conditions even though the situation has not resulted yet in disruptive events that may endanger financial stability at global level. In terms of the US Treasury debt, the increase of yields, which serve as basis to price emerging economies' debt in dollars, continued until mid-November and was accompanied by an increasing expected volatility for the prices of these instruments. Likewise, the US Treasury yield curve shows a somewhat negative slope, generally associated with recessive contexts. In turn, given the rates spreads, the dollar has appreciated 9% throughout the year against the other main currencies (US Dollar Index (DXY)) even though, so far in the second half of the year, the accumulated changes

1 For further information about the evolution of the economic activity at both global and domestic levels as well as a description of the policies applied in Argentina, see the Monetary Policy Report.

have been marginal.[2] As regards the assets with a higher relative risk, the VIX Index (volatility expected for US shares)[3] remained at values similar to the average of the first half of this year (26%), but above the average recorded in 2021 (20%, in line with the historical average of the index). Since the publication of the previous IEF, the
exchanges of advanced nations have recorded some improvement (mainly due to the progress observed since mid-October). In turn, the prices of the main crypto-currencies have evidenced a mixed evolution.[4]

This context of higher interest rates in international markets and dollar appreciation against the remaining currencies is particularly challenging for emerging economies. As a result, in risk monitoring terms, the focus will remain, in the next few months, on the evolution of expectations about the monetary policy bias in developed economies and the resulting impact (see Exhibit 1). So far in the second half of 2022 (until mid-December), the spread between the sovereign debt and the corporate debt in dollars (EMBI and CEMBI) narrowed slightly (with yields in dollars going up). Conversely, the equities segment contracted (MSCI in dollars shrank 4%) within a context where emerging currencies have depreciated against the dollar (almost 3% according to EMCI),[5] while the volatility expected for these currencies (VXY Index) has widened (see Chart 2). These price changes occurred in months characterized by an increase in outflows from investment funds specializing in emerging markets.

Chart 2 | Prices related to emerging economies



* J.P. Morgan Emerging Market Volatilty Index. ** J.P. Morgan Emerging Market Currency Index (EMCI)
Source: BCRA based on Bloomberg, J.P. Morgan and Standard Chartered (based on EPFR).

2 Data of prices updated as of mid-December. It should be mentioned that the increase in US Treasury yields and the appreciation of the dollar came to a halt in October, cutting back partially in November and December (the latter has coincided with improvements in equities prices).
3 A lower expected volatility (lower VIX) is generally associated with a higher risk appetite in international markets.
4 After the sharp drops recorded in the last months of 2021 and the first half of 2022, the prices of the main crypto-currencies rebounded moderately but, by mid-November, they were showing downward corrections once again (in the face of the uncertainty caused by the problems in a specific platform).
5 In the case of Brazil, the Real has depreciated 1% since mid-2022. Nevertheless, the exchange rates evolution was heterogeneous, affecting certain countries due to their macroeconomic fundamentals (including the early beginning of the interest rates increase cycle in some emerging economies).

In Argentina, the economic activity continued improving in the third quarter of 2022, with a higher-than-expected growth, even though the economy is likely to come to a halt in the fourth quarter. Nevertheless, the economy would have expanded above 5% in 2022. The momentum observed in the services sectors that were hit hardest in 2020, in addition to mining and fishing, trade and construction, should be especially highlighted. Within this context, the Central Bank of Argentina (BCRA) has kept its lending policy focused on productive development, and extended the "Credit Line for Productive Investment —LFIP" (see Box 1). Given the acceleration of Headline Inflation (adversely affected by the tensions in the debt markets in pesos and the heightened uncertainty observed domestically in mid-2022) and in order to regularize the monetary policy and gradually converge towards positive real interest rates, the BCRA continued to raise the monetary policy interest rate until September. All of the above was supplemented by additional measures to sustain financial stability, including open market operations (see next paragraphs) and the coordination efforts with the Ministry of Economy to adjust the interest rate structure. The nominal exchange rate was gauged on an ongoing basis (so as to preserve the external competitiveness) and new measures were introduced to improve the regulatory framework related to the exchange market in the current context, promoting an efficient use of foreign currencies and the accumulation of international reserves. For example, measures were implemented to foster the clearing into Argentina and settlement of foreign currency from the exports of soybean and its by-products. On the other hand, within the framework of the arrangement with the International Monetary Fund (IMF), various measures continued to be used to consolidate the fiscal deficit reduction process, the contraction of monetary financing and the increase of net international reserves for the rest of 2022 and for 2023. In this respect, the fulfillment of the targets of the third quarter of 2022 arranged with the IMF was recently announced.

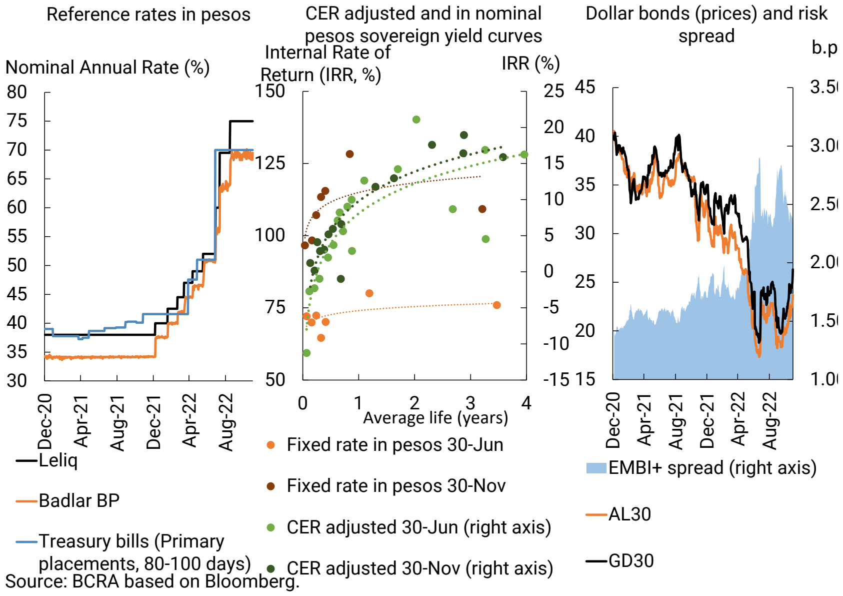
The National Treasury continued to get funds through the domestic market with issues in pesos. The auctions in pesos exhibited an improvement in the refinancing ratios against the first half of the year. [6] In addition, the Treasury performed a remarkable asset conversion transaction in August, including instruments maturing in the following 90 days (with an eligible stock that would be equivalent to a fifth of the stock of debt payable in pesos). It was possible to refinance around 75% of the payments related to exchangeable instruments by delivering bonds in dual currency due between June and September 2023 (Dollar-linked/CER). This was supplemented by an additional swap in November (corresponding to maturities of the last two-month period), based on the delivery of the same type of instruments. In ordinary auctions, awarding concentrated in short-term bills, mainly LECER and LEDES. Consequently, the average term of issuance has shortened while the validated yields have widened, in line with the evolution of other reference (benchmark) rates (see Chart 3).

6 Between July and November, the refinancing rate stood at around 168% on average (137% accumulated from January to November).

As mentioned above, after the deterioration observed by mid-2022 in the prices traded in the secondary market, the BCRA implemented a series of measures. On the one hand, it sought to reduce financial volatility through Open Market Operations (OMA), thus reasserting its commitment to operate on the yields curve of the public debt in domestic currency and ensuring that the yields of the secondary market do not exceed in excess the yields resulting from primary auctions.[7] In addition (Communication "A" 7546), the monetary authority started to offer financial institutions a put option on the Treasury securities awarded as from July (due before December 2023), in exchange for a premium. Likewise, Mutual Funds (*Fondos Comunes de Inversión – FCI*) were allowed to carry out repo transactions with the BCRA.[8] These measures were adopted for the purpose of promoting a deeper capital market and safekeeping financial equilibrium (anticipating and tackling situations of vulnerability).[9] Although progress has been made in recent years to rebuild the debt market in pesos, it is still being developed and has room for growth. A deeper, more liquid and transparent debt market in pesos helps reduce the liquidity risks faced by investors (including banks), promotes a more efficient debt management by issuers and improves the valuation of financial instruments (thus contributing to a more efficient channeling of funds), among other factors.[10]

In line with the rises in the monetary policy rate and the structure of the interest rates, the yields of the debt in pesos in nominal terms in the secondary market posted increases (of up to 40 percentage points – p.p.) in the second half. In the case of CER-adjusted debt, after the period of

Chart 3 | Interest rates and fixed income instruments in Argentina



Source: BCRA based on Bloomberg.

7 The BCRA is seeking to gradually converge, in the medium term, towards an economic liquidity management based on open market operations (OMA) with Treasury Bills and other short-term instruments denominated in domestic currency (this mechanism is similar to the one used by other countries). For further information, see "Intervention by the BCRA in the Debt Market in Pesos", IPOM, September 2022.
8 For further information, see Communications of July 12, July 28 and August 11.
9 See "Objectives and Plans Report for 2022 concerning the development of monetary, exchange, financial and lending policies".
10 See, for example, "Rebuilding of the Public Debt Secondary Market in Pesos and Liquidity Risk", Exhibit 1, Financial Stability Report - Second half of 2021 (IIS- 21).

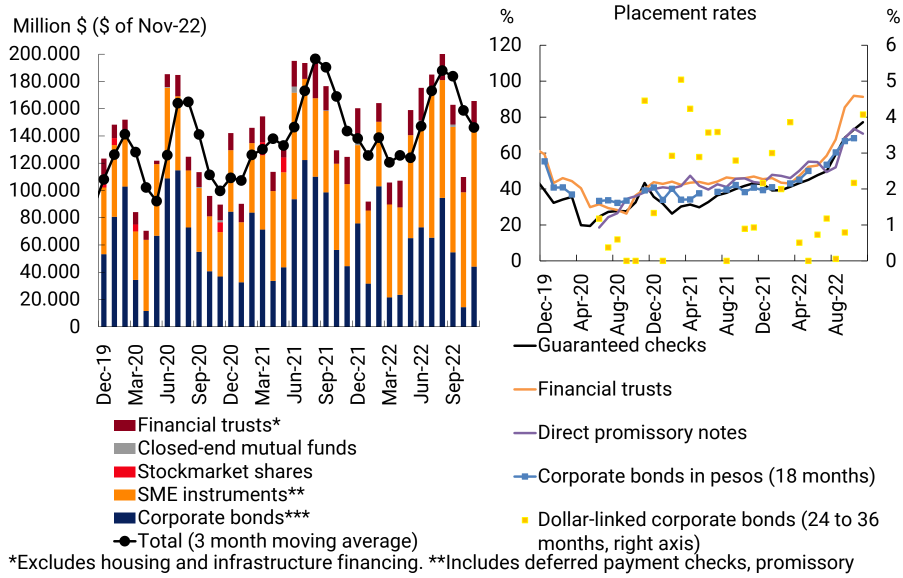
stress, the yield curve tended to flatten and yields returned to positive values again for the shortest terms (which were showing negative values by late June) while the yields of the longest section of the curve went down. In the case of instruments in dollars, the yield curve remained inverted with increasing yields in the shortest section of the curve.

So far in the second half (from July to November), the stock of private sector lending through the capital market —involving the issue of Corporate Bonds, deferred payment checks, promissory notes, financial trusts, shares and other— remained virtually unchanged in year-on-year terms (y.o.y.; see Chart 4) with annualized flows accounting for around 2% of GDP. In turn, against the same number of months in the immediately preceding period, the financing amounts in constant currency recorded a 16% growth and mainly resulted from the momentum observed in promissory notes[11] (up 162% in amount to account for 26% of total funding flows over the period, more than doubling its share in the total). The weight of this instrument was close to that of deferred payment checks (the amount of which stood virtually unchanged in real terms against previous months and accounted for 30% of the total flows between July and November). In turn, the amount of Corporate Bonds, the main financing instrument (explaining 33% of flows over the period), contracted 5% in constant currency against the same number of months in the immediately preceding period. Among Corporate Bonds, the transactions of the oil & energy sector[12] stood out while, in terms of funding currency, most issues were performed in pesos, followed by dollar-linked instruments. Conversely, the lending amount through financial trusts, particularly related to loans for consumption,[13] dropped 13% in constant currency against the previous months (accounting for 10% of the financing flows considered for this period), and 14% year-on-year.

As regards the conditions of new financing, the issue terms for the various instruments of the capital markets tended to shorten in general, [14] while yields went up, in line with the main reference (benchmark) rates. [15]

11 With an average term below one year.
12 During the last half, 3 new green, social and sustainable Corporate Bonds were issued. Thus, there is a total now of 35 bonds since the first issue in 2017. In terms of currency, instruments denominated in dollars stand out (close to 90% of funding obtained so far). A breakdown analysis by sector shows that, as expected, the energy sector stands out. As of November, the lending stock within the framework of the "Guidelines for issuance of green, social and sustainable securities in Argentina" of the National Securities Commission (CNV) and the Sustainability-Linked Bonds Principles account for 5% of total stock of Corporate Bonds of the corporate sector.
13 For example, personal loans accounted for 82% of total assets under trusts over the period. Out of this total, the share of banks and non-banking financial institutions was not significant (3% of securitization amounts), as it has been observed in recent years. In perspective, for example, towards 2015 banks and non-banking financial institutions (EFNBs) accounted for 18% of securitization amounts.
14 This evolution was more marked in dollar-linked Corporate Bonds, the average term of which (weighted by amount) shortened to 41 months between July and November, from 66 months in the previous five months (when 5 Corporate Bonds from the sectors of electricity, oil and commercial flights services were issued at 120 months). For Corporate Bonds in pesos, the average term went to around 15 months from 16 months (in such periods, respectively). As regards deferred payment checks (with information available as of November), terms have shortened to less than 100 days. Finally, in the case of promissory notes in pesos and financial trusts, the trend was mixed (the average term stood at 310 and 370 days, respectively).
15 Conversely, in the case of dollar-linked Corporate Bonds, a drop in cut-off yields of the issues was noticeable (average weighted by amount). This is due to the fact that many corporate bonds were issued at 0% yield (33 out of a total of 49 Corporate Bonds in the segment between July and November).

Chart 4 | Financing to the private sector through the domestic capital market

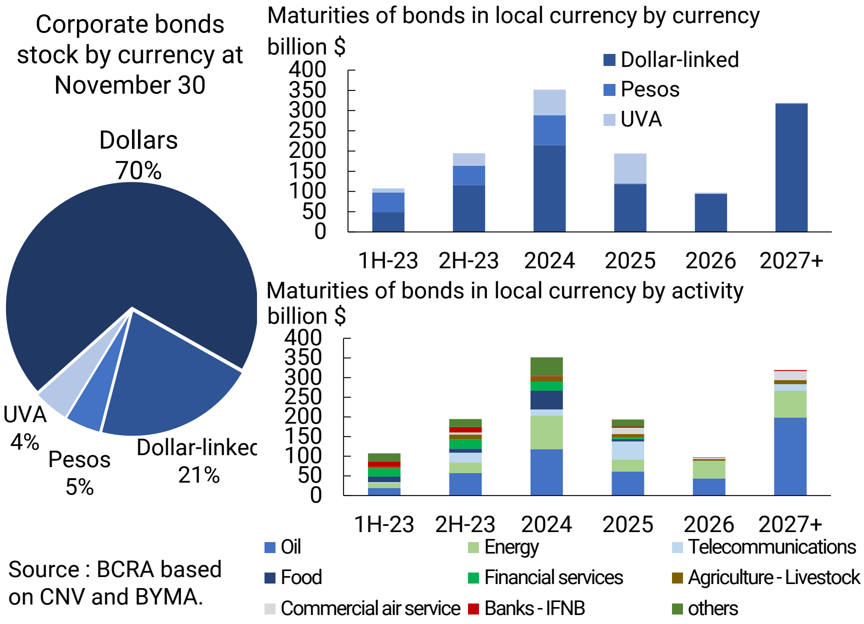


*Excludes housing and infrastructure financing. **Includes deferred payment checks, promissory notes and credit notes. ***Excludes swap operations and debt restructurings.
Source: BCRA based on BCBA, CNV and MAVSA..

Finally, in terms of the Corporate Bonds maturity profile, the payments for the first half of 2023 totaled an amount equivalent to ARS360 billion. In this sense, since most of the outstanding stock is denominated in dollars, around 70% of the payments are in such currency and the rest is payable in domestic currency (dollar-linked, pesos and UVA)[16] (see Chart 5). Nevertheless, given the recent renewal of the tool implemented by the BCRA to refinance liabilities in foreign currency until late 2023, [17] the amount of payments scheduled for the near future could end up being lower than currently expected. In turn, most Corporate Bonds maturities payable in pesos (nominal pesos, UVA and dollar-linked) largely correspond to transactions of sectors such as finance (particularly non-banking financial services, in addition to banks and non-banking financial institutions), oil and food.

16 Corporate Bonds maturities in dollars amount to around USD1.5 billion in the first half of 2023.
17 Communication "A" 7106 as amended, in force since October 2020, which enables to refinance a significant part of maturities in dollars of 2021 and 2022. So far the in second half, there have been 2 additional transactions related to Corporate Bonds of companies belonging to the energy and oil sectors.

Chart 5 | Total stock of Corporate Bonds by currency – Maturity profile (focus on those payable in pesos) by currency and economic activity



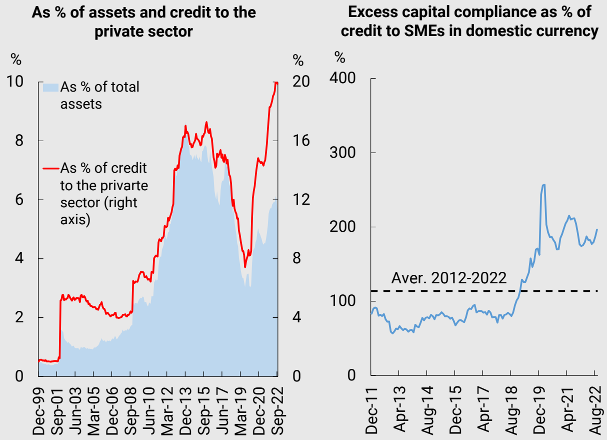
Source : BCRA based on CNV and BYMA.

Box 1 / Lending to SMEs and "Credit Line for Productive Investment"

In 2022, the BCRA continued consolidating its credit policy focused on the development of the productive sector, particularly micro, small and medium-sized enterprises (MSMEs). Since its launch in November 2020 and until October 2022, the "Credit Line for Productive Investment (LFIP)" was the main instrument to boost lending to MSMEs, accumulating disbursements for almost ARS3.3 trillion and reaching over 327,200 companies. By the end of the third quarter of 2022, the stock of the LFIP would have totaled ARS932.8 billion, equivalent to 12.5% of the total stock of loans to the private sector. Almost 41% of the total stock of loans under the LFIP was channeled to finance investment projects. In order to continue supporting loans to MSMEs, in September 2022, the BCRA extended the LFIP to March 2023.[18] In terms of credit risk materialization, the non-performing ratio of debtors with loans channeled through LFIP stood below the ratio corresponding to total companies (0.6% v. 3.2%).

It is estimated that, since the publication of the previous Financial Stability Report (IEF), over 2,800 companies without previous access to bank financing have entered the financial system, reaching a total close to 15,000 new companies since the launch of this credit facility. In line with the description given in the previous IEF, almost all the companies (94%) receiving a loan under the LFIP had a headcount of less than 100 employees. It is estimated that 20.7% of the total people with registered jobs under contract of employment in the Argentine private sector are working for companies receiving lending via the LFIP (+1.2 p.p. above the record of April 2022).[19]

Chart B.1.1 | Lending to SMEs in domestic currency
Financial system



Source: BCRA

Boosted by LFIP, the stock of bank financing in pesos provided to SMEs (legal persons) at aggregate level has been growing since early 2020 to account for almost 20% of the total stock of loans to the private sector as of September 2022 (+4.1 p.p. y.o.y.), 5.6% of the financial system's assets (+0.8 p.p. y.o.y.) (see left panel of Chart B1.1.), and represents 1.7% of GDP (+0.3 p.p. y.o.y.). Against this context of marked momentum in terms of lending to SMEs, it is worth pointing out that the system has a remarkable level of resilience in case of an eventual materialization of credit risk in this segment. In this sense, as of September, the capital surplus of the ensemble of institutions totaled 197% of lending to SMEs in domestic currency, down 7.7 p.p. in year-on-year terms but well above (83 p.p.) the average of the last 10 years (see right panel of Chart B.1.1).

18 The institutions involved in this plan shall maintain, until March 2023, a stock of financing of at least 7.5% of their private sector deposits in pesos corresponding to September 2022. Interest rates will remain at a nominal annual percentage rate of 64.5% for loans intended for investment projects and at a nominal annual percentage rate of 74.5% for loans for other purposes. For further detail see, the Consolidated Text.
19 According to information as of August 2022 of the Ministry of Labor, Employment and Social Security.

2. Main Strengths of the Financial System Given Current Risks

Throughout 2022, the Argentine financial system developed its intermediation activities and provided payment services on an ongoing basis. Over the year, the system has managed to keep moderate exposures to the risks faced and high coverages, while preserving most of the strength features identified for the sector in the previous Financial Stability Report (IEF). Below there is a review of the most outstanding positive aspects while, in the following sections, some of these features will be analyzed in depth, together with other attributes to assess the potential vulnerability sources of the financial system.

Table 1 | Main indicators of the financial system's soundness

	Financial system			State-owned banks			Domestic private banks			Foreign private banks			NBFI		
	Sep-21	Apr-22	Sep-22	Sep-21	Apr-22	Sep-22	Sep-21	Apr-22	Sep-22	Sep-21	Apr-22	Sep-22	Sep-21	Apr-22	Sep-22
Liquidity															
Liquidity Coverage Ratio (1)	2.2	2.0	2.0	2.0	1.7	1.9	2.3	2.0	1.9	2.5	2.4	2.3	-	-	-
Net Stable Funding Ratio (1) (2)	1.9	1.9	1.9	1.7	1.7	1.8	2.1	2.1	2.0	2.0	1.9	2.1	-	-	-
Broad liquidity / Deposits (%)	68.7	68.0	72.3	59.0	61.4	66.0	75.2	72.6	77.9	75.9	72.8	76.0	41.6	49.0	66.1
In $	65.0	64.1	68.6	56.7	59.2	64.1	70.3	68.4	73.3	72.2	67.1	70.7	28.0	41.9	55.9
In US$	86.1	88.9	95.7	71.4	75.0	79.7	100.5	99.0	111.5	88.6	95.7	100.3	256.1	163.8	246.9
Solvency															
Regulatory capital / RWA (%)	26.4	27.8	28.9	24.1	25.7	26.3	30.6	31.5	32.3	25.2	26.6	29.0	19.4	21.0	20.5
Regulatory capital Tier 1 / RWA (%)	24.7	26.3	27.7	23.3	25.0	25.7	27.6	29.2	30.4	23.7	25.2	27.8	17.6	18.8	18.3
Leverage ratio (%) (1)	13.2	13.9	14.3	11.1	11.5	11.8	14.9	16.0	16.5	13.9	14.8	15.3	17.4	24.2	22.7
Capital conservation buffer (% verification)	100	100	100	100	100	100	100	100	100	100	100	100	91	99	90
Domestic systemically important banks buffers (% verification)	100	100	100	100	100	100	100	100	100	100	100	100	-	-	-
Regulatory capital / Credit to private sector net of provisions (%)	48.0	50.1	55.2	41.0	42.8	49.5	58.2	61.0	65.2	49.4	51.0	55.4	18.7	20.7	21.3
(Regulatory capital - Regulatory requirement) / Credit to private sector net of provisions (%)	33.2	35.6	39.9	27.5	30.0	34.9	42.5	45.1	48.6	33.4	35.3	39.8	10.7	12.6	12.5
Profitability															
ROE in homogeneous currency (%a.) (3)	8.5	8.5	9.1	9.0	9.6	13.3	6.4	9.0	7.3	11.3	8.0	8.2	-15.4	-19.3	-30.5
ROA in homogeneous currency (%a.) (3)	1.3	1.4	1.5	1.2	1.3	1.9	1.1	1.6	1.3	1.9	1.4	1.5	-2.8	-3.6	-5.7
Private sector credit															
Private sector exposure / Assets (%)	30.8	30.9	28.3	30.4	30.7	27.5	28.2	28.4	26.2	32.1	32.0	30.2	80.5	76.6	72.4
Non-performing loan ratio (%)	5.0	3.6	3.1	7.5	5.5	5.1	3.9	2.6	2.1	3.1	2.0	1.4	5.9	5.7	4.7
Provisions / Credit to private sector (%)	5.6	4.3	4.0	6.8	5.2	5.3	4.9	3.7	3.1	4.9	3.7	3.2	4.2	4.0	4.9
Public sector credit															
Exposure / Assets (4)	13.4	15.1	15.5	21.1	21.2	20.0	11.4	15.2	14.8	6.3	9.1	10.7	0.5	0.7	0.8
Net exposure / Assets (%) (5)	0.4	2.4	2.5	-4.9	-4.6	-6.1	2.1	6.7	6.4	5.2	8.0	9.9	0.5	0.7	0.8
Currency risk															
(Assets - Liabilities + Net term purchases in foreign currency) / Regulatory capital (%)	10.0	11.8	27.9	25.9	26.5	53.2	3.1	6.2	22.5	1.6	2.4	6.4	28.3	36.0	40.5
Deposits in US$ / Total deposits - Private sector (%)	18.6	15.8	14.4	15.1	12.8	12.0	17.7	14.5	13.1	23.0	20.0	18.3	6.1	5.9	5.4
Loans in US$ / Total loans - Private sector (%)	12.2	8.3	8.0	12.1	8.7	8.1	9.3	6.4	6.6	14.7	9.4	9.0	15.8	12.2	6.4

(1) The Apr-22 column includes the latest available information, which corresponds to Mar-22 for these indicators. (2) Jun-22 last available data. (3) 12-month accumulated.
(4) Position in government securities (excluding BCRA securities) + Loans to the public sector. (5) Position in government securities (excluding BCRA securities) + Loans to the public sector - Public sector deposits.
RWA: Risk weighted assets
Source: BCRA

i. High liquidity ratios. Taking into account the international standards in terms of liquidity, such as the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR) recommended by the Basel Committee, the ensemble of domestic institutions subject to compliance with the regulation (Group A)[20] continued to sizably exceed the regulatory minimum values, and posted no significant changes over the last year. The domestic levels for these indicators continue to be relatively high when compared to those of other financial systems (see Chart 6).

In September 2022, the financial system's broad liquidity[21] stood at 72.3% of total deposits (68.6% for the segment in pesos and 95.7% for the segment in foreign currency), and it has exceeded the values observed in the previous IEF and in the same period of 2021 (for further detail about liquidity coverage, see Section 3.3).

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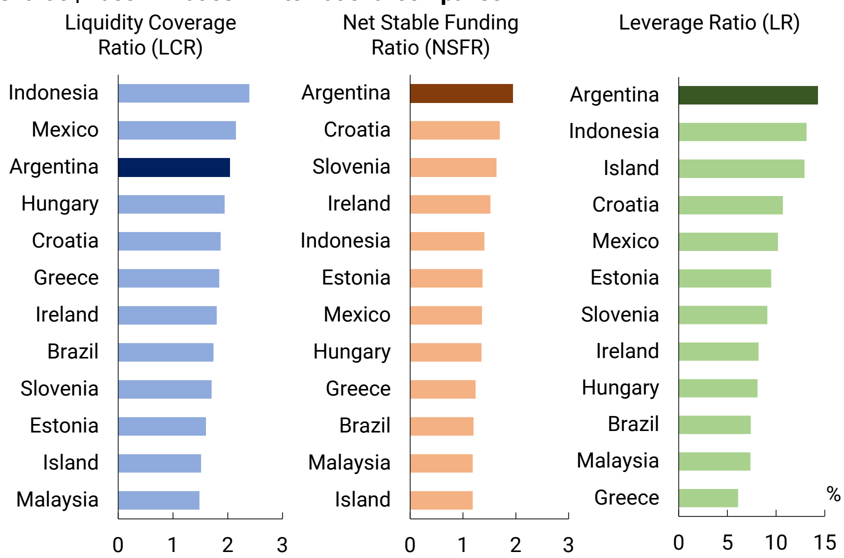
20 It includes financial institutions with assets equal to or higher than 1% of total assets of the financial system. For further detail, see the Consolidated Text on Financial Institutions' Authorities.
21 Considering the stock of liquid assets, the concepts included in the compliance with the minimum cash regime and other BCRA instruments, in both domestic and foreign currency.

ii. High solvency levels. Against the previous IEF and in a year-on-year comparison, Regulatory Capital (RC) for the aggregate financial system has increased slightly in terms of the risk-weighted assets (RWAs), standing at 28.9% in September (see Table 1). In turn, the excess of regulatory capital (ASE minus the minimum capital regulatory requirement, before considering the additional capital buffers —capital conservation buffer and systemic importance buffer—) accounted for 260% of the regulatory requirement (for further detail, see Section 3.1).

In order to supplement the minimum capital requirements, the ensemble of financial institutions has also kept a high leverage ratio (according to the definition of the Basel Committee), which has stood sizably above the minimum threshold (3%) required by the domestic prudential regulation. This ratio went up slightly against the previous IEF and in year-on-year terms, and exceeds the ratios observed in other financial systems (see Chart 6).

Over the last quarters, the aggregate financial system has kept positive profitability levels (see Section 3.2), underpinning the abovementioned solvency indicators. In addition, these high levels

Chart 6 | Basel III Ratios – International comparison



Note: Last available data for 2022 (except NSFR of Brazil, to Dec-21).
Source: Financial Soundness Indicators (IMF) and Central Banks.

in capital ratios were kept in a context where, so far in 2022, there was a gradual (and moderate) distribution of dividends[22] (see Section 3.1).

iii. Low relative share of loans to the private sector in foreign currency and of private sector deposits in foreign currency in the aggregate financial system's balance sheet. Financial intermediation activities in foreign currency have stood at moderate and declining levels over the last year (see Section 3.2). Loans to the private sector in foreign currency (mainly provided to companies whose income correlates with the exchange rate) accounted for only 8% of the total stock of credit to the private sector in September 2022, posting a drop against the previous IEF and in a year-on-year comparison (these have been low values if compared to the average of the

22 During 2020 and 2021, in the context of the pandemic, the macroprudential regulation implemented by the BCRA suspended financial institutions' distribution of dividends. In 2022, financial institutions could distribute up to 20% of the profits accrued until 2021in 12 monthly installments. See the Consolidated Text on Distribution of Profits.

last 10 years, 13.4%). In turn, deposits in the same denomination have totaled 14.4% of private sector deposits, posting a lower ratio than that of last April and also of the figure recorded one year ago (and also moderate in relation to the average of the last 10 years, 19%).

iv. Low exposure to private sector credit risk with a reduction of the non-performing ratio and high provisioning levels. By the end of the third quarter, the private sector's exposure to the ensemble of financial institutions stood at 28.3% of total assets, posting a drop against the level observed in the previous IEF and against September 2021. This ratio is standing below the average of the last 10 years (42%).

In September, the non-performing ratio of loans to the private sector stood at 3.1%, keeping a downward path in the last 12 months (see Section 3.1), with lower delinquency rates in longer-term financing, as is the case of mortgage lines, which have been supported by a set of policies implemented by the Federal Government to deal with the situation of this sector (see Exhibit 2). In turn, provisioning levels of the financial system reached 4% of the private sector total portfolio and 129.2% of the non-performing portfolio of loans (+18.5 p.p. y.o.y.) (see Box 2).

Given the abovementioned strengths, the Argentine financial system is expected to respond with a high level of resilience if an adverse scenario held true. There follows a summary of the main potential risk factors (exogenous to the ensemble of institutions) that may be faced by the Argentine financial system in the short and medium term. It is estimated that an eventual scenario of materialization of the risk factors should be highly extreme (i.e., an event very unlikely to occur) to have a significant impact on the financial stability conditions.

Risk of an increasing deterioration of the external context, given the risk factors and the existing vulnerabilities at global level. The external context is showing an increasingly complex outlook for emerging economies, due to the interest rate rises in developed economies, the widespread appreciation of the US dollar and the expectations of an economic slowdown worldwide (with the possibility of a recession and an impact on commodity prices). Given the sources of vulnerability at global level (still overvalued assets in some segments, higher incidence of investment funds with a procyclical performance affecting portfolio flows, a trend to a widespread increase of indebtedness across companies and countries, potential contagion of new drops in the prices of cryptoassets) and given the most adverse financial conditions, it is still likely that various factors[23] may suddenly affect risk appetite at global level, thus triggering new turbulent episodes in the international markets. In this respect and depending on the nature of the shock that may finally materialize, its impact may be related to the world economic activity (and a reduced international trade) or to global markets and the financial channel (widespread drops in prices and disorderly capital movements). In the first case, the activity level would be more directly conditioned at domestic level (impacting adversely on the demand for credit and the risk of repayment by the various agents). In the second case, a higher volatility in financial markets (including interest rates and exchange rate)

23 Including, for instance, sudden changes in expectations about the monetary policy bias of developed economies, an escalation in the armed conflict in Ukraine —see Exhibit "Conflict between Russia and Ukraine and Challenges for the Global Financial Stability" in IEF I-22—, negative news about COVID epidemic in the framework of the winter season in the northern hemisphere or sizable credit events (or a significant increase in the downgrade of credit ratings and defaults) that may lead to a sudden reconsideration of risk appetite among investors.

would impact on the financial intermediation conditions (in terms of both funding and uses) and on the credit risk faced by banks.

Risk of a higher-than-expected slowdown of economic activity and/or higher volatility in the financial market. Even though the economic activity has continued to recover in Argentina, posting a higher growth rate in the third quarter of 2022 than originally expected, this momentum would have come to a halt in the fourth quarter of 2022, while a context of deceleration is expected for 2023. The evolution of activity will depend on some additional factors, including not only the evolution of the external context but also idiosyncratic issues such as climate conditions and their impact on agricultural production, with still uncertain consequences in terms of the drought in 2023. In addition, there are highly relevant investment projects underway in the energy sector that would affect the trade balance and the objective of international reserves accumulation, added to a context of greater austerity in the fiscal policy, as well as the challenges of reducing the current inflation levels and the uncertainty typically inherent in election years. Economic growth will also depend on the existence of a stable context in the financial and exchange markets. The measures applied during the stress episodes observed by mid-2022 and the ongoing monitoring by the BCRA of the evolution of the sovereign bonds market (and the interest rate structure) and the currency market would precisely contribute to such purpose. If a less robust economic growth than originally expected held true or if there were a resurge of tensions in the domestic markets, and depending on the intensity of these eventual developments, this situation might condition the context where financial intermediation takes place and raise the credit risk in the system.

Increasing operational risk in a context characterized by financial innovation and a higher dependence on technology. Given the emergence of new operations, financial digitalization and the boom of teleworking, the financial sector is more exposed to the materialization of shocks related to information technologies (including fraud and/or cyberattacks) that may result in losses or sanctions and may even adversely affect the general operation of markets, depending on their scope. In recent years, intense work has been performed to adjust monitoring processes and mitigate this type of risks. Even though no systemic events of this sort have occurred so far in the domestic market, efforts continue to be made in terms of awareness, prevention and surveillance to improve cyber resilience.

In the medium and long term, there are additional risk factors to be taken into account. They include, for instance, the risks involved in the increasing use of cryptoassets at world level, due to the volatility of their prices and the challenges they entail for the implementation of the monetary and exchange policies in emerging economies (like that of Argentina, even though its use is still limited at domestic level),[24] among other. On the other hand, the risks related to climate change have given rise to a work agenda at global level and, in this respect, Argentina is member of some international forums and institutions (see Box 3), in order to improve the information available and the monitoring process of the channels through which the financial sector would be affected. In addition, given the degree of progress made in the regularization of the policies implemented during

24 For further detail, see Exhibit 3 of IEF, July 2022.

the COVID-19 pandemic, the truth is that the structural changes to be tackled in a postpandemic context are still to be seen in the medium term (such as changes in business models of various economic sectors —in addition to the financial sector—and their impact across different markets and regions).

The next section will provide a detailed description of the results of the financial stability analysis. It includes the main sources of vulnerability identified for the domestic financial system, given its level of exposure to the abovementioned risk factors. These sources of vulnerability will be contrasted with the strengths of the financial system, in order to assess its conditions of resilience in the face of any eventual materialization of the risk factors.

Box 2 / Exercises of Sensitivity to Credit Risks

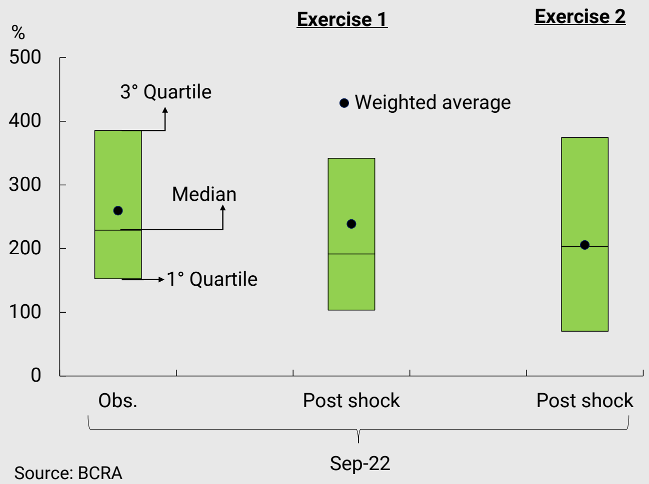
In line with the content of previous issues of IEF, two sensitivity exercises have been performed here in order to display the degree of resilience of the aggregate financial system in the face of a potential materialization of adverse, extreme and hypothetical (unlikely) events of credit risk.[25] These exercises seek to estimate the specific impact effect (without second round consequences, for example) on the solvency of the institutions upon any lack of payment by debtors.

Exercise 1: It is assumed that (i) the non-performing ratio of loans to the private sector goes up and stands at the maximum value reached in the last 15 years (for each institution); this means that we have included periods of increase in this ratio in 2008-2009 (mainly in the segment of loans to households) and late 2019 (largely in the segment of loans to companies); (ii) non-payment of all non-performing loans (net of provisions estimated on them).[26] On the basis of data corresponding to September 2022, it is estimated that, after this shock, the median of the capital position (Regulatory Capital (RC) – capital requirement; in terms of compliance) of the financial system would go from 229% (weighted average of 259.6%) to 191.6% (weighted average of 238.6%, see Chart B.2.1).

Exercise 2: It is assumed that (i) companies (including their employees) belonging to the sectors that have been hit hardest by the pandemic,[27] fail to repay the loans received from the financial institutions. On the basis of the impact created by the exercise, the median of the financial system's capital position would go down by 25.4 p.p. of the requirement, to 203.7% (the weighted average would go down by 53.8 p.p., to 205.8%).

The estimated results from the abovementioned exercises point out the remarkable size of the hedging made by the financial system.

Chart B.2.1 | Sensitivity exercises on the capital position



Source: BCRA

25 The guidelines established in Box 5 of IEF I-22 are followed.
26 The stock of provisions for the non-performing portfolio is estimated, together with total provisions net of the theoretical provisions on the non-performing portfolio (according to the criteria set by the rules on regulatory minimum provisions for loan loss exposure).
27 Transport and communication, Hotels and restaurants and Other social and community services. For further detail, see IPOM.

Box 3: Sustainable Finance. Scope of the International Recommendations.

The effects of climate change and the transition to activities with lower levels of greenhouse gases emissions have started to shape the international economic agenda and, consequently, to impact on the traditional operations and business of banking institutions at world level.[28] International organizations related to the promotion of global financial stability are playing a key role in this issue. Due to the fact that the comprehensive management of the risks related to climate change is a relatively new element of the financial system, these organizations have tried to make progress in the identification and standardization of the best practices applied in the various jurisdictions.

In June 2022, the Basel Committee on Banking Supervision (BCBS) published a document[29] including recommendations on the principles tending to foster a shared treatment in the management of climate-related financial risks (encompassing credit, liquidity, market, and operational risks), but keeping the flexibility required to include the heterogeneity observed, that depends on the situation of every jurisdiction and on the practices developed on this matter. One part of these principles is addressed to banks and includes issues related to governance, internal control framework, risk assessment and management, capital and liquidity adequacy and scenario analysis. The remaining principles focus on the task of the supervisor/regulator and include aspects related to prudential regulatory requirements and the responsibilities, powers and functions of the supervisors. Thus, the Committee expects that institutions may gradually introduce the consideration of these risks in their strategies and business models, as well as their governance and risk management processes.

The Financial Stability Board (FSB) developed a roadmap to address the financial risks related to climate change where it fosters the inclusion of this problem by means of a financial stability analysis, considering the interconnectedness among the various segments of this sector (banks and other non-banking financial segments). In 2022, it published its first report[30] on the progress made, describing the steps forward in areas such as disclosure, data, and vulnerabilities analysis, as well as regulatory and supervisory practices and tools. The understanding of these risks and the policy approaches to tackle them are still in an early stage.

In this framework, the BCRA is working together with the Ministry of Economy and the insurance and securities regulators[31] for the purpose of collecting information to make a diagnosis about the degree of awareness and inclusion of financial risks related to climate change by the financial institutions operating in the domestic market. The results of this survey will be highly useful to have an initial diagnosis and will be introduced to the process of analysis and assessment of the steps to be followed in order to gradually move towards a comprehensive implementation within the framework of risk management and monitoring.

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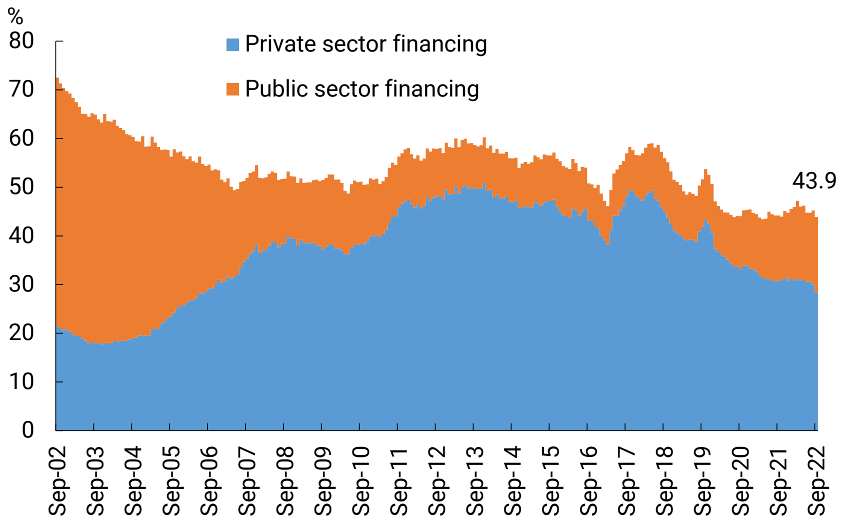
28 See Exhibit 3 of IEF June 2021.
29 Principles for the effective management and supervision of climate-related financial risk.
30 FSB Roadmap for Addressing Financial Risks from Climate Change 2022 progress report.
31 In the framework of the Technical Roundtable on Sustainable Finance (MTFS).

3. Sources of Vulnerability and Specific Resilience Factors of the Financial System

3.1. Balance Sheet Exposure to Credit Risk

In September 2022, the financial system's total exposure to credit, in terms of both the private and the public sectors,[32] stood at 43.9% of total assets (see Chart 7), and remained in a context of moderate levels if compared to the average of the last 20 years (54.3%). This ratio dropped 2.2 p.p. relative to the record included in the previous IEF and 0.3 p.p. against the same month of 2021, mainly due to the evolution observed in the private sector.

Chart 7 | Financial system's gross exposure to the private sector and the public sector
As % of total assets



Source: BCRA

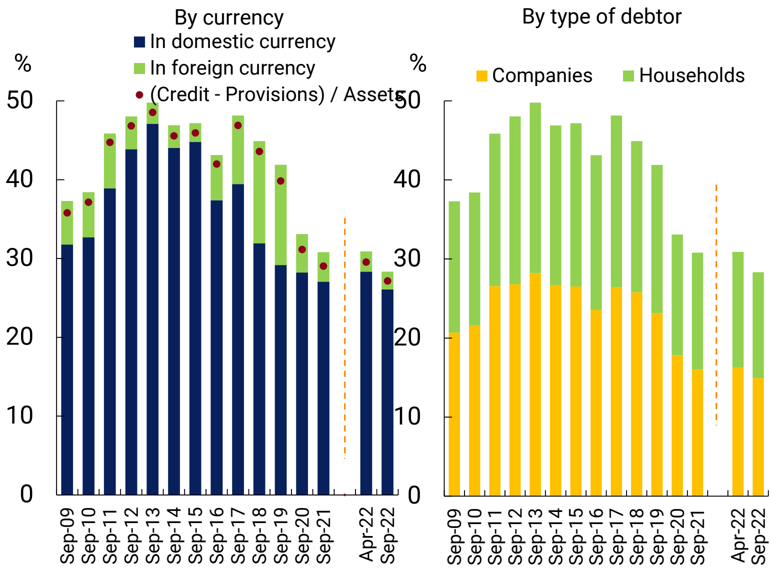
By the end of the third quarter of 2022, the financial system's exposure to the private sector continued to stand at low and declining levels (see Chart 8). The stock of loans to the private sector accounted for 28.3% of the aggregate financial system's assets in September (down 2.6 p.p. against the previous IEF and -2.5 p.p. y.o.y.), and stood below the average of the last two decades (36.9%).[33] This lower exposure, if compared to the value stated in the previous IEF, was mainly driven by the segment of lending in domestic currency (-2.3 p.p., to 26.1% of assets).[34]

The financial system's exposure to lending to households accounted for 13.4% of assets as of September (down 1.2 p.p. and 1.4 p.p. against the previous IEF and against the same period of 2021, respectively). In turn, loans to companies totaled 14.9% of the sector's assets as of September (-1.3 p.p. if compared to the previous IEF and -1.1 p.p. y.o.y.). As observed in Chart 9, the credit exposure of the ensemble of institutions shrank against April 2022 for all groups of

32 In this case, financing via sovereign bonds is considered, in addition to loans.
33 Lending to the private sector net of total provisions in terms of assets also went down against the previous IEF (2.4 p.p., to 27.2%).
34 The share of loans to the private sector in foreign currency in total assets contracted 0.3 p.p. against the previous IEF, standing at 2.3% as of September.

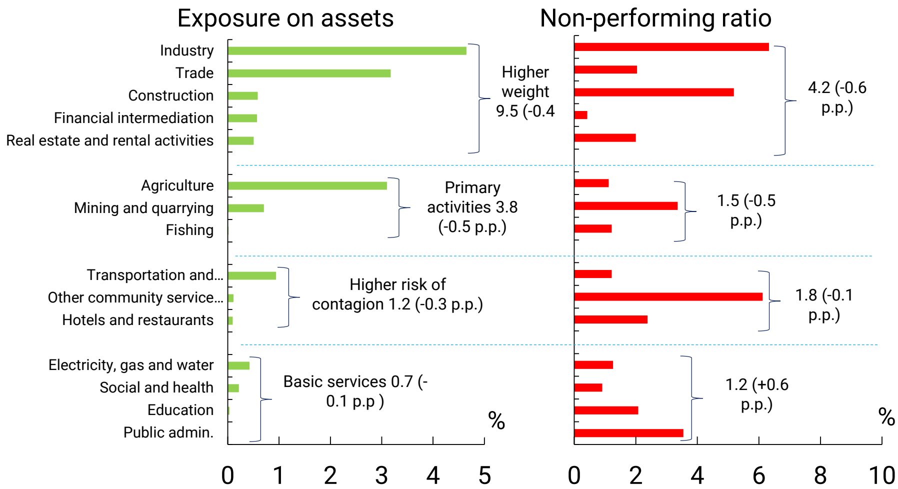
economic sectors[35], and the decrease was relatively higher in the primary sector and relatively lower in basic services.

Chart 8 | Lending to the private sector as % of assets – Financial system



Source: BCRA

Chart 9 | Financing and non-performing ratio of loans to companies by main activity – Information as of September 2022



Note: variations are vs. Apr-22 (previous FSR).
Source: BCRA

Within a context of a more limited exposure to the private sector, the non-performing ratio of loans to such sector has continued posting a gradual decline since the previous edition of the IEF, and stood at 3.1% in September 2022 for the financial system as a whole (down 0.5 p.p. against

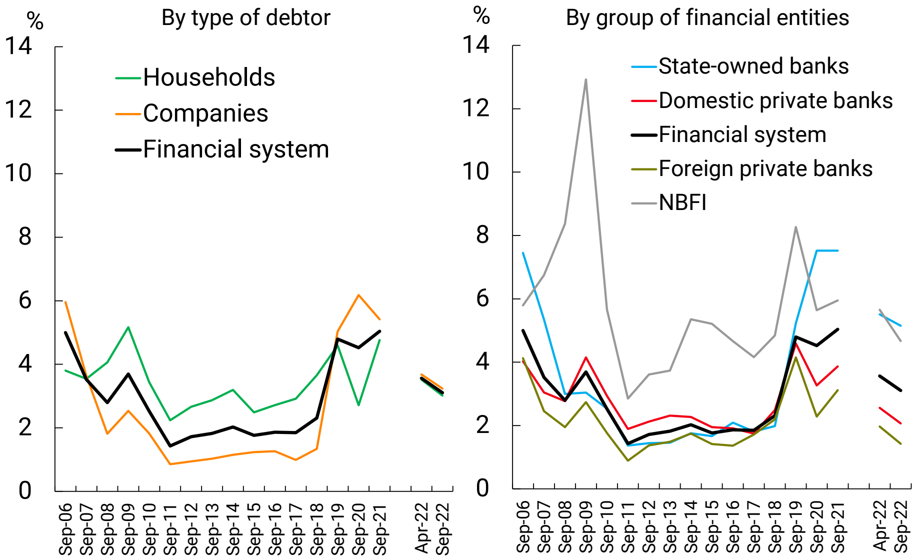
35 Economic activities were grouped in four categories: (i) Highest weight and other (Industry, Trade, Construction, Financial intermediation and Real estate and business activities), (ii) Primary activities (Agriculture & Livestock, Fishing and Mining), (iii) Hardest hit by the pandemic (Transport and communications, Hotels and restaurants and Other social and community services), and (iv) Basic services (Public administration, Health care, Education, and Electricity, gas and water).

the previous IEF and -1.9 p.p. y.o.y.). The drop of this ratio included both the segment of loans to households and the segment of lending to companies, and was widespread across all groups of financial institutions (see Chart 10). The current figures of the non-performing ratio of loans to the private sector are standing below the values observed before the onset of the pandemic (the average value for this ratio was 5.4% from September 2019 to February 2020) (see Exhibit 3), even though it is still standing above the value of the period with the greatest stability in the delinquency ratio (1.8%, on average in the period 2011-2017).

The non-performing ratio of loans to households stood at 3% of such portfolio in September, down 0.5 p.p. against the figure recorded in April 2022 (-1.8 p.p. y.o.y.), and this evolution was largely due to the performance of pledge-backed loans and personal loans. Regarding lending to companies, the non-performing ratio contracted 0.4 p.p. over the period (-3.1 p.p. y.o.y.) to 3.2%, and this change mainly resulted from the performance of companies engaged in the construction business and in industry. When compared to the previous IEF, there was a decrease in the non-performing ratio of companies whose main activity is developed in the sectors with a higher weight in the economy,[36] accompanied by an increase in the non-performing ratio of companies involved in activities related to basic services (see Chart 9).

In line with the decline in the non-performing ratio, the Estimated Default Probability (PDE) —an indicator that provides information about the transition of debtors' credit rating—[37] posted a decrease in recent months, both in the segment intended for households and in the segment intended for companies (see Chart 11) and, in both cases, the current level stood below the historical average.

Chart 10 | Non-performing ratio of loans to the private sector

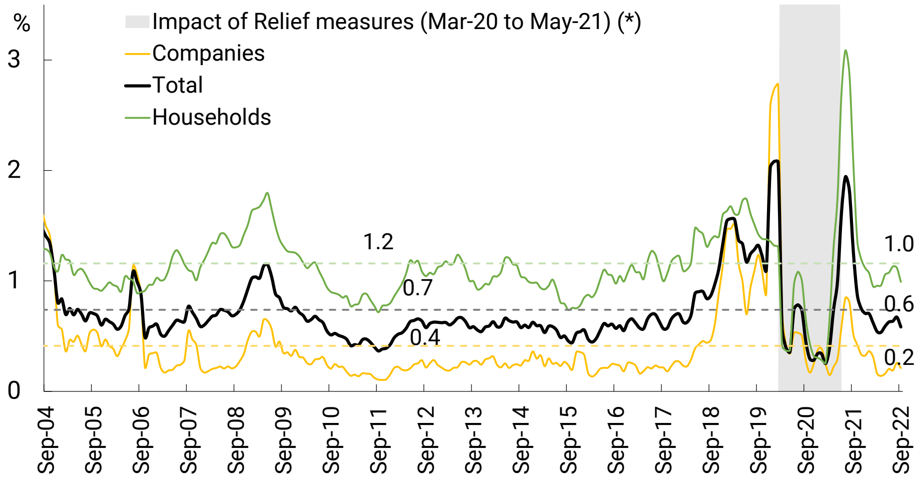


Source: BCRA

36 See previous footnote.
37 It is defined as the proportion of the lending stock that was initially standing at a 1 or 2 credit condition (performing) and then goes to a 3, 4, 5 and 6 credit condition (non-performing) by the end of the period under analysis (in this case, a 3-month comparison is taken).

On the other hand, the financial system's exposure to the public sector stood at 15.5% of assets in September, up 0.4 p.p. and 2.2 p.p. against the record observed five months ago and in a year-on-year comparison, respectively. The exposure to the public sector has stood below the average of the last 20 years (17.4%). The level of this indicator was higher in the group of state-owned banks (20% of assets, down 0.2 p.p. against the previous IEF), followed by domestic private banks (14.1% of assets, down 0.4 p.p. against the previous IEF) and by foreign private banks (10.7% of assets, up 1.6 p.p. against April). When considering public sector deposits, the financial system has kept a net asset position against this sector, standing at around 2.5% of its total assets (up 0.3 p.p. against the value recorded in the previous IEF).

Chart 11 | Estimated Default Probability (PDE) – Stock of loans to the private sector



Note: default Probability is calculated as the percentage of regular financing that becomes irregular between t-3 and t. (*) The impact of the provisional relaxation of the bank debtor classification parameters driven by Com. "A" 6938 (03/19/20) of BCRA. The averages do not contain the impact of Relief Measures. Source: BCRA.

The eventual materialization of the abovementioned risk factors (especially a lesser momentum in terms of economic activity) may impact on this relative source of vulnerability of the financial system via its incidence on the payment capacity of debtors. Given the relatively low levels of exposure to credit risk and the highly relevant elements of resilience mentioned above, it is estimated that only an extreme materialization of these risk factors could create stress episodes in the financial system (see Box 2).

3.1.1 Elements of Resilience and Mitigating Measures:

The financial system continues to keep high levels of provisioning and capitalization. As of September, the accounting provisions represented 4% of the total financing to the private sector and 128.8% of the non-performing portfolio.[38] Over the period, the excess of regulatory capital of the ensemble of financial institutions (on top of the minimum required) was equivalent to 39.6%

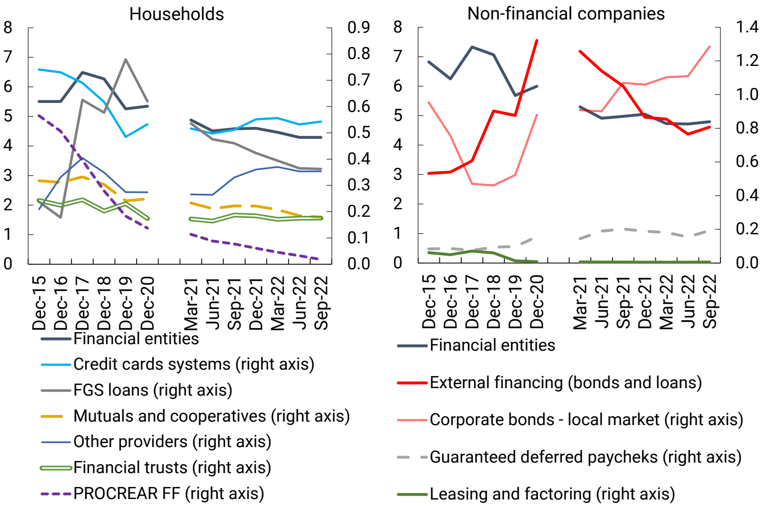
38 These ratios stood at 3.6% and 128.8% when considering the average of the last 10 years and totaled 3.6% and 114.5% in the average of the 2008-2010 period (international financial crisis).

of the loans to the private sector net of provisions (widely exceeding the average of the last 10 years, 16.5%).

The concentration of private sector debtors in the financial system has dropped once again. In September, the share of the top 100 and top 50 debtors (taking the total stock of debt in the ensemble of institutions) accounted for 12.5% and 9.6% of the loans to the private sector, respectively (-0.8 p.p. against the previous IEF, in both cases) and reached the lowest records in the last 20 years (see Box 4).[39]

The credit origination standards (Optimal Capital Structure – OCS) posted no significant changes in the last 10 quarters (according to the answers of the BCRA's Survey on Credit Conditions). There was only a slight restriction in the OCS in credit cards for the household segment in the last Survey. Regarding the maximum amounts, there was a slight ease in the segments of both companies and households.

Chart 12 | Broad financing to households and companies
As % of GDP



Fuente: BCRA based on INDEC, CNV, MAE, MAV, ANSES and INAES

Limited indebtedness levels (and, in perspective, largely tending to decline) in both households and companies. As of September, the credit ratio in a broad sense[40] as percentage of GDP was equivalent to 5.9% of GDP for households and 10.9% for companies (see Chart 12). This entails a

39 Given that the number of the financial system's debtors went from nearly 4 million in early 2003 to over 12 million in September 2022, it is also possible to study the degree of concentration by analyzing the relative share of a constant group, once these shares have been organized in descending order relative to the financial system. In this case, the first millionth part of debtors (with the highest stock of debt) currently accounts for 5.1% of the total stock of debt (below the historical average of 5.4%), while the first one-hundred thousandth part (with the highest stock of debt) accounts for 13.7% (below the average of 17%).
40 Stocks as of September as percentage of GDP and estimated as of the third quarter of 2022, seasonally-adjusted. In addition to the loans provided by the ensemble of financial institutions regulated by the BCRA, this stock includes: financing via the credit card systems, loans granted by mutuals and cooperatives (based on the National Institute of Associations and Social Economy (INAES)), lending from other non-banking credit providers registered with the BCRA, financing held in the portfolio of financial trusts not related to infrastructure, loans from the Sustainability Guarantee Fund (FGS) (including the PRO.CRE.AR portfolio), corporate bonds issued by the non-financial private sector under domestic legislation, deferred payment checks, loans related to leasing and factoring, and external financing (based on INDEC) via bonds and loans (excluding credit and commercial advances). For data about external financing (INDEC), the latest data published (June) are used and an adjustment is made on the basis of the exchange rate.

slight decrease in the ratio if compared to the level observed six months ago for households, and some stability in the ratio in the case of companies (even though, in perspective, both ratios are standing below the average of the last 5 years). In turn, the data corresponding to publicly-traded companies have shown a decrease in the leverage ratio (see Box 5), even though these companies have also exhibited a rise in the ratio of financial debt net of liquidity to operating income. The evolution of credit ratios in a broad sense as percentage of GDP has occurred in a context of activity growth since the previous IEF. In the case of the credit ratio in a broad sense for households, there were decreases in the stock in real terms over the last quarters, for the main component (bank loan) and for the remaining components. In the case of companies, total stocks have dropped in real terms, with heterogeneous changes in the various components. There are drops in real terms in the case of bank loans and financing from abroad, accompanied by rises in the case of domestic Corporate Bonds (among the main components).

Households' debt burden in terms of their bank debt services has continued to be limited. It is estimated that households' debt service burden accounted for 10.4% of the wage bill, and this burden has contracted relative to its level of six months ago and in a year-on-year comparison.

The share of **financing to the private sector in foreign currency in the aggregate assets of the financial system has continued to stand at low and decreasing levels**: 8% in September 2022 (average of 14.1% in the last 20 years), down 0.3 p.p. against the previous IEF. In addition to this low gross exposure, the credit risk being faced by the sector as a result of eventual exchange rate fluctuations is limited on the basis of the domestic macroprudential regulations. The BCRA has limited the uses to which the institutions may allocate their lending capacity from deposits in foreign currency in order to prevent their exposure to debtors' currency mismatches.[41]

3.2. Evolution of the Financial Intermediation Activity

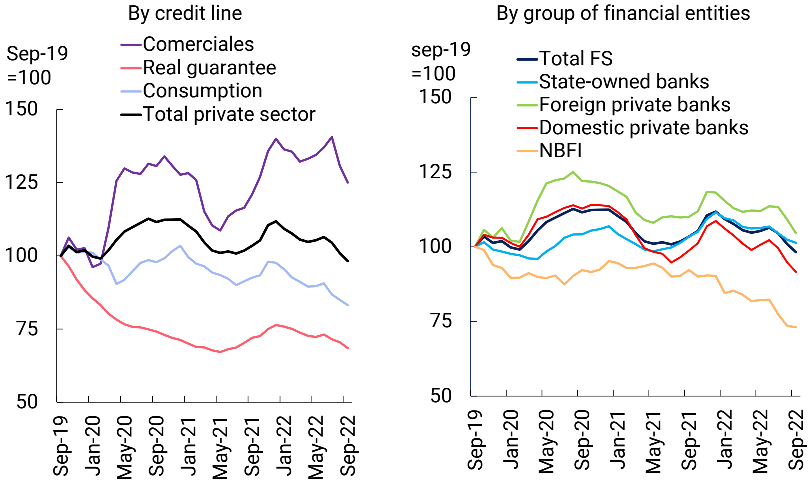
The financial intermediation activity of the ensemble of financial institutions with the private sector have contracted since the publication of the previous IEF. Against a backdrop of an economic activity slowdown in the third quarter of the year, the stock of lending in pesos to the private sector in real terms shrank against the record of April 2022, and also in year-on-year terms. In turn, the stock of private sector deposits in pesos in real terms went up in both periods of time. Regarding the segment in foreign currency, the stock of private sector loans and deposits (in currency of origin) has fallen since the publication of the previous IEF, in line with what has been observed over the last year.

The stock of lending in pesos in real terms to the private sector contracted 6.2% from April to September, and has accumulated a 5.1% y.o.y. drop in real terms (see Chart 13). In the last five months, the reduction of financing was widespread across the various groups of financial institutions and in most credit lines (except for assets under financial lease and pledge-backed

41 The purpose of the regulatory approach on this matter is to separate the transactions arranged in domestic currency from the transactions arranged in foreign currency. The resources coming from deposits in foreign currency can only be channeled to debtors collecting their income from foreign trade transactions and related activities and, if not applied to this type of use, they must be kept available (liquid). For further detail, see the Consolidated Text on Credit Policy and the Consolidated Text on Minimum Cash.

loans). In turn, commercial loans have continued to exhibit a higher relative momentum in recent years, and this performance was driven in part by the “Credit Line for Productive Investment” (LFIP) of Micro, Small and Medium-Sized Enterprises (MSMEs), one of the main credit stimulus instruments for this segment of companies, implemented by the BCRA. Regarding the segment in foreign currency, the stock of loans to the private sector in this denomination has gone down 4.8% since the previous IEF —in currency of origin—, leading to a 27.1% y.o.y. drop. Consequently, the total stock of loans (in domestic and foreign currency) has shrunk in the last five months and also in a year-on-year comparison (-6.5% in real terms and -9.4% y.o.y. in real terms).

Chart 13 | Stock of loans in pesos to the private sector in real terms*



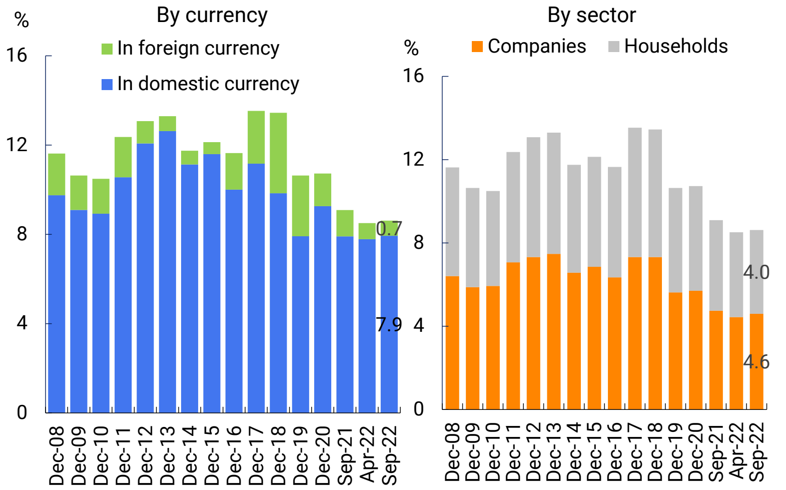
*Not seasonally adjusted. Total includes adjustments of principal and interest accrued. Commercial includes overdrafts, documents and leasing. Real guarantee: mortgages and pledge-backed. Consumption: Personal and credit cards. Source: BCRA

The ensemble of financial institutions continues to keep a limited (and decreasing) credit depth in the economy. It is estimated that the total stock of loans to the private sector accounted for 8.6% of GDP (7.9% of this stock in domestic currency) (see Chart 14). A breakdown by segments shows that the estimated stock of lending to companies as percentage of GDP stood at 4.6% in September, up 0.6 p.p. against the level of financing to households. These levels are standing below the ones observed in recent years and in other economies of the region.

Considering the financial system’s funding, the stock of private sector deposits in pesos went up 2.8% in real terms in September against April (previous IEF) and 1.1% y.o.y. in real terms. Within the regularization process of the interest rate structure, the BCRA continued raising the reference (benchmark) interest rate over the period in order to ensure a path of positive returns in real terms. Consequently, since the publication of the previous IEF, both traditional private sector time deposits in pesos and UVA-denominated deposits have continued to exhibit sizable increases (see Box 6). In turn, the stock of private sector sight accounts in real terms contracted over the period (-3.1% against April and -6.9% y.o.y.). In terms of the segment in foreign currency, the stock of private sector deposits in this denomination dropped 2.6% against April —in currency of origin— (-9% y.o.y.). Thus, private sector total deposits (including all currencies) have recorded a slight increase in the last five months (+1.1% in real terms), going down 3.9% y.o.y., in real terms.

Chart 14 | Total stock of loans to the private sector in GDP terms

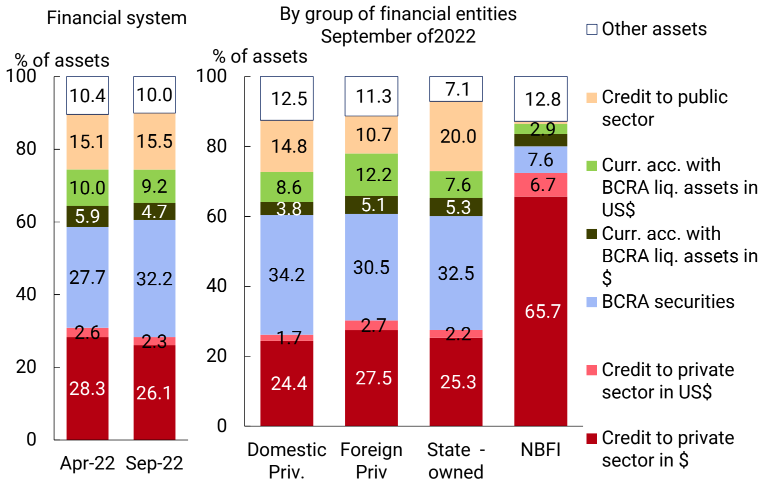
Financial system



Note: Quarterly averages of both the numerator and denominator are considered. GDP for September 2022 estimated. Source: BCRA

The size of the financial system's balance sheet (total assets in real terms) has not posted significant changes against the previous IEF and against the value recorded one year ago. Regarding the components, there has been an increase in the share of BCRA's instrument holdings (see Chart 15) and of the stock of lending to the public sector, accompanied by a decrease in the share of total loans to the private sector and of the remaining liquid assets over the last five months.[42]

Chart 15 | Composition of total assets by main items



NBFI: Non-Banking Financial Institutions. Source: BCRA

42 A breakdown by currency shows that there was an increase in the relative share of items denominated in foreign currency from April to September, accompanied by a decrease in the share of items denominated in pesos and items adjusted by CER or denominated in UVA. These movements were mainly due to the effect of the Federal Government's debt swap carried out in August 2022, whereby bonds and bills in pesos (with and without adjustment by CER) were exchanged for new bonds in dual currency due in 2023 (yield in pesos resulting from a higher change between CER plus a coupon of 2% annually and the peso-dollar exchange rate).

In line with the description provided in Section 1, the economic activity is expected to grow in 2023, subject to a potential scenario of some uncertainty inherent in election years and to the challenge of reducing the current inflation levels. In this context, there is still room for the financial system's intermediation activity to gain momentum —mainly in the financing lines focused on productive development—, on the basis of higher saving levels in domestic currency with positive returns in real terms and an increasing supply and scope of financial services. Nevertheless, this source of vulnerability would have an impact if any of the abovementioned risk factors held true.

3.2.1. Elements of Resilience and Mitigating Measures:

The sector's profitability has continued to stand at positive levels, going up in the third quarter even though the performance has been mixed across the institutions. The ensemble of financial institutions has managed to keep positive profitability levels in 2022, posting a slight year-on-year increase even though starting from levels below those of 2020 (see Table 2). The financial system's total comprehensive income in homogenous currency stood at 1.5% annualized (a.) of assets in the aggregate of nine months (+0.5 p.p. y.o.y.), and at 9%a. of equity (+2.6 p.p. y.o.y.). In a year-on-year comparison, there was higher income from securities and, to a lesser extent, an increase in the income from interest. These effects were offset in part by higher expenses for interest paid (in the framework of the borrowing interest rate rises and an increasing share of time deposits) and higher losses for exposure to monetary items (due to the rising inflation against 2021).

Table 2 | Financial system's profitability chart – In homogeneous currency

Annualized (a.) - In %a. of netted assets	IIIQ-21	IVQ-21	IQ-22	IIQ-22	IIIQ-22	2020*	2021*	2022*
Financial margin	**11.7**	**12.8**	**13.7**	**15.3**	**18.7**	**11.3**	**11.8**	**15.9**
Interest income	7.7	8.1	8.3	8.8	9.9	8.7	7.8	9.0
CER and CVS adjustments	1.1	1.6	1.4	1.8	1.8	1.3	1.5	1.7
Foreign exchange price adjustments	0.5	0.6	0.8	0.9	1.9	0.8	0.6	1.2
Gains on securities	9.0	8.7	12.6	17.0	21.7	8.3	9.0	17.1
Returns on repo	4.9	5.2	2.3	1.1	2.7	1.1	4.1	2.0
Interest expense	-11.5	-11.3	-11.9	-14.3	-19.3	-8.6	-11.2	-15.1
Other financial income	0.0	-0.1	0.2	-0.1	-0.1	-0.3	0.1	0.0
Service income margin	**1.9**	**1.9**	**1.8**	**1.9**	**1.9**	**1.9**	**1.8**	**1.9**
Loan loss provisions	**-0.9**	**-0.7**	**-0.8**	**-0.9**	**-0.9**	**-1.6**	**-1.1**	**-0.8**
Operating costs	**-6.4**	**-6.6**	**-6.2**	**-6.6**	**-6.7**	**-6.6**	**-6.4**	**-6.6**
Net Monetary Position	**-3.2**	**-3.7**	**-5.8**	**-7.2**	**-8.1**	**0.0**	**-3.6**	**-6.8**
Tax charges	**-1.6**	**-2.2**	**-1.6**	**-1.8**	**-2.4**	**-1.9**	**-1.4**	**-1.8**
Results	**1.5**	**1.6**	**1.0**	**0.7**	**2.4**	**3.1**	**1.2**	**1.7**
Other Comprehensive Income (OCI)	**-0.1**	**-0.1**	**0.0**	**0.4**	**0.2**	**-0.6**	**-0.2**	**-0.2**
Return on assets (ROA)	**1.4**	**1.5**	**1.0**	**1.1**	**2.7**	**2.5**	**1.0**	**1.5**
Return on equity (ROE)	**8.9**	**9.6**	**6.3**	**6.8**	**15.2**	**16.9**	**6.4**	**9.0**

In accordance with Com. "A" 7211, as from 2021 the adjustments related to the effect of price changes are fully reflected in the monetary results. The aforementioned adjustments had an impact on different income statement accounts in the 2020 quarters. * Accumulated 9 months up to September
Source: BCRA

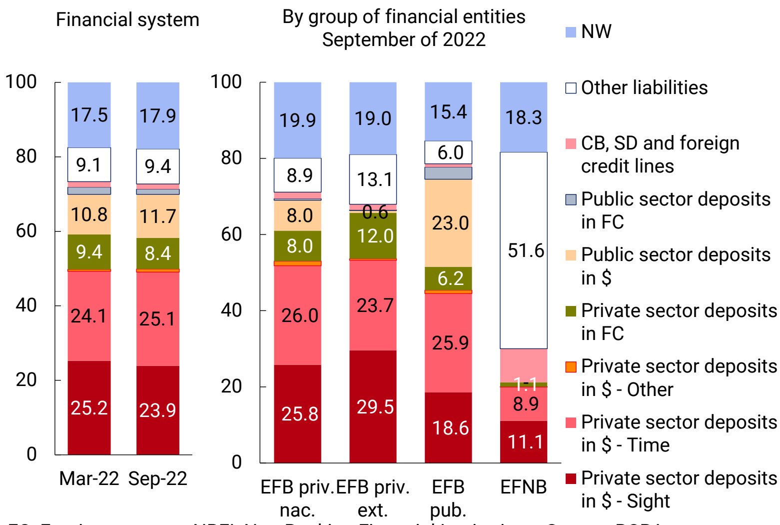
Regulation and supervision scheme. The BCRA continues providing a regulatory and supervision framework adjusted to the characteristics of the domestic financial market and in line with the international recommendations in terms of the best practices on the matter.

Credit policy focused on the development of the productive system. Throughout 2022 the "Credit Line for Productive Investment (LFIP)" of MSMEs continued to be one of the main tools to provide loans to small and medium-sized enterprises (see Box 1). In addition, the BCRA also promoted various measures tending to benefit this segment of companies. As from October, the Minimum Cash Regime in pesos was simplified, keeping the deductions aimed at favoring loans for productive purposes for MSMEs.[43] In parallel, the BCRA sought to consolidate the MSME Electronic Credit Invoices (FCEMs) as the instrument for financing MSMEs, setting in motion the Database of Electronic Invoices Not Paid Upon Maturity (CenFIV), which will provide transparency to operations and will create a credit history, thus improving the traceability of this instrument. The use of FCEMs promotes simpler operations, more consistent with the daily practices of MSMEs.[44]

3.3. Financial System's Funding and Liquidity

The preeminence of funding via deposits continues to be a characteristic feature of the financial system. As of September, nearly half of total funding corresponded to private sector deposits in pesos (49.9%), a percentage that increases to 61.6% when considering public sector deposits in pesos and to 71.3% when including all sectors and currencies (see Chart 16). The remaining funding of the ensemble of financial institutions basically consists in capital (17.9%) and, to a lesser extent, in debt instruments, such as Corporate Bonds, subordinated debt, external financing and other liabilities.

Chart 16 | Composition of funding
As % of total funding



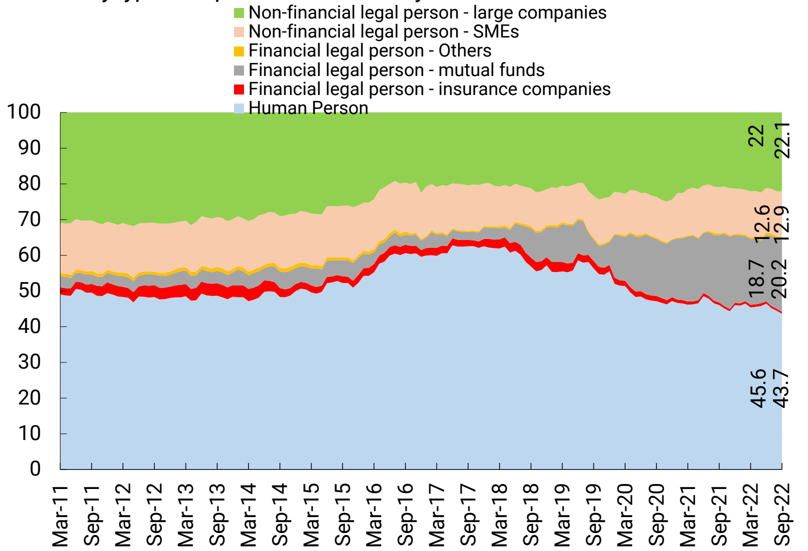
FC: Foreign currency. NBFI: Non-Banking Financial Institutions. Source: BCRA

43 Communication "A" 7536.
44 For further detail, see Press Release of November 1, 2022.

As mentioned in Section 3.2, there was a positive performance of private sector time deposits in domestic currency if compared to the figures of the previous IEF. This translated into an increase in the share of these deposits in the financial system's total funding. To a lesser extent, there was also an increase in the relative share of public sector deposits in pesos and equity in the same period. Conversely, the share of the stock of deposits in foreign currency lost ground in total funding over the period.

Other aspects to consider in terms of the financial system's exposure to liquidity risks are the profile or type of depositor, the degree of concentration of deposits and the relative maturity of liabilities. In the last six months, there has been a slight increase in the share of deposits related to Mutual Funds (see Chart 17 and right panel on Chart 18), even though the share of deposits made by natural persons still prevail.[45] On the other hand, the momentum observed in time deposits in recent months translated into a slight rise in the average maturity of the main liabilities (see left panel on Chart 18), mitigating the abovementioned exposure to liquidity risk.[46]

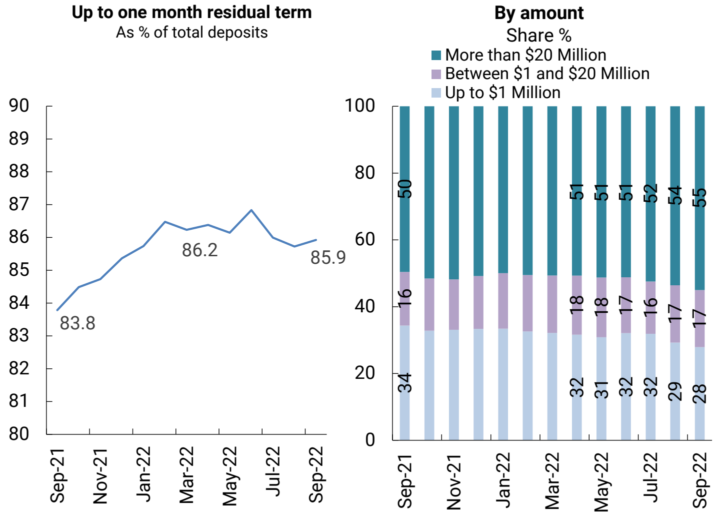
Chart 17 | Stock of private sector deposits in domestic currency
Share % by type of depositor – Financial system



Source: BCRA

45 The share of deposits in domestic currency made by Mutual Funds (FCI) totaled 20.2% as of September, up 1.5 p.p. against the previous IEF and 1.3 p.p. y.o.y. On the other hand, there was an increase in the share of deposits in domestic currency for over ARS20 million in total funding, especially during the third quarter (+3.8 p.p. against mid-2022 and +5.5 p.p. y.o.y. to 55% in September).
46 Deposits in domestic currency with a residual term shorter than 1 month accounted for 85.9% of the total, down 0.5 p.p. against the level observed in the previous IEF.

Chart 18 | Deposits in domestic currency
Financial system



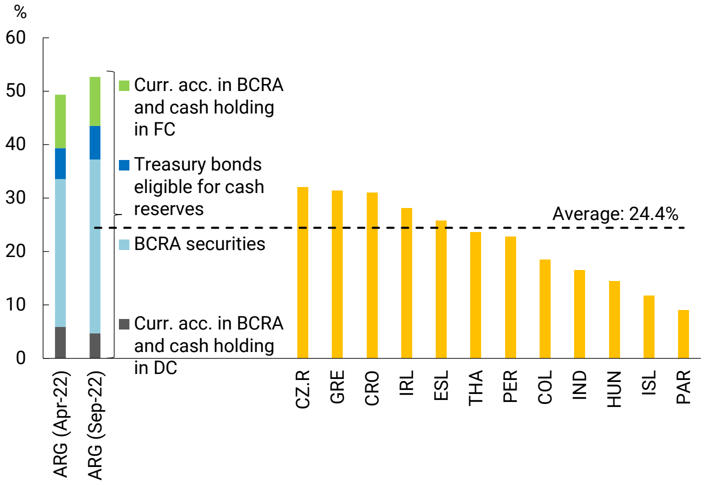
Source: BCRA

In this context, eventual changes in the level and composition of the sector's funding cannot be ruled out if any of the risk factors mentioned in Section 2.2 finally held true.

3.3.1 Elements of Resilience and Mitigating Measures:

High liquidity ratios. As of September, the domestic financial system recorded a stock of liquid assets in a broad sense equivalent to 52.7% of total assets, and these levels are quite high if compared to the levels of other financial systems (see Chart 19). In terms of total deposits, liquid assets in a broad sense totaled 72.3%, up 4.3 p.p. against the record of the previous IEF. This ratio is also high if compared to the average of the last 15 years (48.5%). By the end of the third quarter, and for the items in domestic currency, this ratio stood at 68.6% (+4.5 p.p. against April) while, for the items in foreign currency, it stood at 95.7% (+6.8 p.p. against April).[47]

Chart 19 | Liquid assets as % of total assets
International comparison

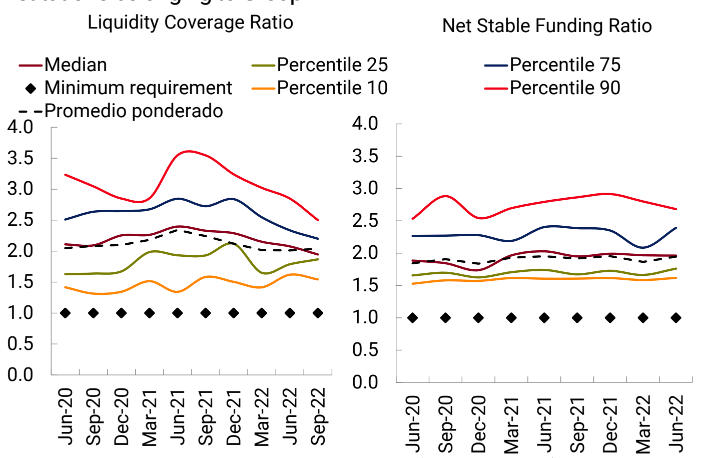


*Up to Jun-22, except Argentina (Sep-22), Czech Republic (Mar-22), Greece (Mar-22) and Thailand (Mar-22). FC: Foreign currency. DC: Domestic currency. Source: IMF and BCRA

47 In the last 15 years, the average of the broad liquidity ratio of the aggregate financial system in pesos totaled 43.8% and 80.9% for the segment in foreign currency.

International liquidity standards. Liquidity ratios, based on the recommendations of the Basel Committee and incorporated to the domestic prudential regulatory system, stood at sizable levels for the group of institutions subject to compliance with such requirements, virtually doubling the minimum regulatory values (see Chart 20).[48] In relation with the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), the levels of all institutions stood above the regulatory minimum value, posting no significant changes against mid-2021 and 2021 year end.

Chart 20 | Basel liquidity ratios
Institutions belonging to Group A



Note: The regulated entities belong to group A (Comm."A" 6538) and represented 88.6% of assets in Jun-22. Source: BCRA

Low dependence on funding via Corporate Bonds for the aggregate financial system, with most maturities in pesos for the next half year. As of September 2022, Corporate Bonds accounted for 0.8% of the financial system's total funding. Even though 89% of the Corporate Bonds stock corresponds to banks and 11% to non-banking financial institutions (EFNBs), this instrument has a higher share in EFNBs' funding (8.5%) than in banks' funding (0.7%), taking into account only the institutions that get their funds from Corporate Bonds.[49] Out of the total stock of the institutions' outstanding bonds (equivalent to ARS173.71 billion), 77% of such total is denominated in dollars. However, 91% of the bond maturities estimated for the first half of 2023 (estimate as of November 2022) for ARS20.51 billion, is denominated in domestic currency.[50] Since the publication of the previous IEF (July to November) and regarding the conditions of issue in the domestic market, there were transactions for ARS14.9 billion against maturities for ARS20 billion in the same period. The amounts of these issues of Corporate Bonds imply a drop of 39% in real terms against the immediately preceding period (see Chart 21). In turn, the new Corporate Bonds issued in pesos (at the BADLAR rate plus a spread) showed an increase in the cost following the BADLAR[51] rate and a shortening of issue terms (from 19 to 12 months) against the first half of the year.

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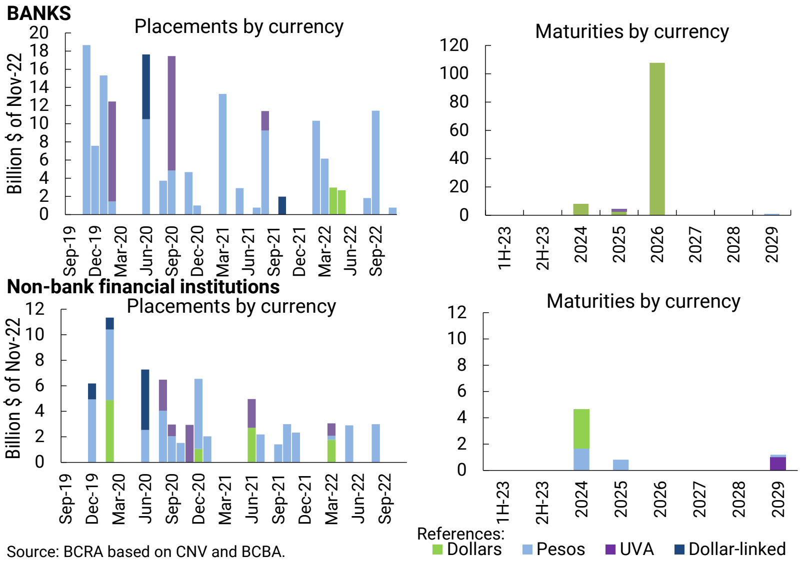
48 The financial institutions subject to compliance with these requirements are those belonging to Group A. For further detail about these ratios, see the Consolidated Text on Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR).
49 Out of a total of 78 institutions, only 20 (7 EFNBs and 13 banks) have outstanding Corporate Bonds as of November 2022.
50 Payments for 63% in pesos, 19% in UVA, 8% dollar-linked and 9% in dollars (domestic market).
51 While the spread on the BADLAR at private banks tended to drop between July and November.

Chart 21 | Genuine Corporate Bonds (domestic and foreign legislation) of Banks and EFNBs –Figures in billion pesos



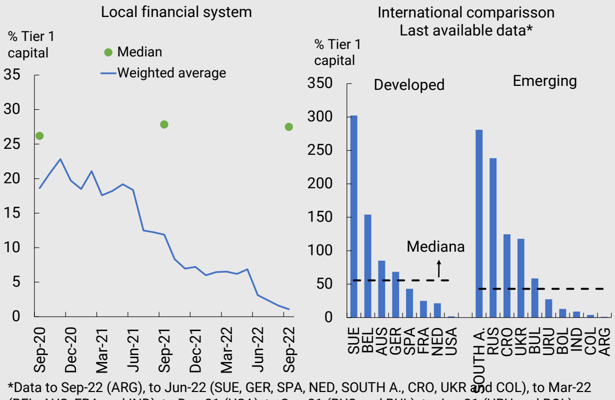
Source: BCRA based on CNV and BCBA.

Box 4 / Large Exposures to Credit Risk

In line with the international standards on the matter,[52] the BCRA released by the end of 2018 the domestic regulatory framework regulating large exposures to credit risk of the non-financial private sector and strengthened the already existing regulations to tackle this issue.[53] The objective is to limit the losses that might potentially occur in the event that any counterparty of a large size may incur in a default payment. As a general criterion, an exposure is classified as large if it is equivalent to 10% or more of the institution's Tier 1 capital. The regulation established a general maximum ceiling of 15% of the institution's total capital against any counterparty from the non-financial private sector. From a macroprudential perspective, this approach to credit risk is supplemented by a set of standards.[54]

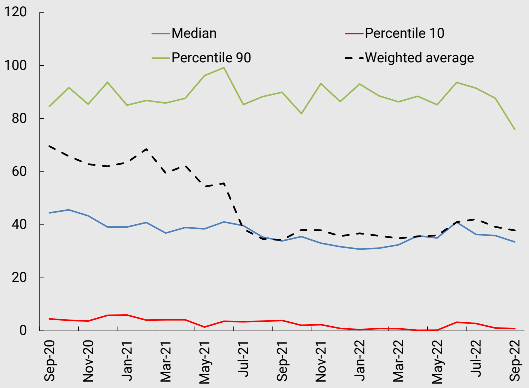
At aggregate level, the relevance of large exposures in the financial system has been losing ground in recent years. As of September 2022, the large exposures of the ensemble of institutions accounted for only 1.1% of the aggregate Tier 1 capital, down 5.1 p.p. against the previous IEF and quite below the records of late 2020 (see Chart B.4.1, left panel). This is one of the lowest levels if compared to those of other financial systems (see Chart B.4.1, right panel). In general, a reduced number of institutions have shown large exposures in recent years (they amounted to 35 by the end of 2020, and to 25 as of September 2022).

Chart B.4.1 | Large exposures to credit risk



*Data to Sep-22 (ARG), to Jun-22 (SUE, GER, SPA, NED, SOUTH A., CRO, UKR and COL), to Mar-22 (BEL, AUS, FRA and IND), to Dec-21 (USA), to Sep-21 (RUS and BUL), to Jun-21 (URU and BOL).
Source: IMF y BCRA

Chart B.4.2 | Main 20 debtors in each institution - As % of Tier 1 capital



Source: BCRA

In the same sense and for the aggregate financial system, the relative share of the debt stock held by the main 20 debtors (as per each institution, whether they comply or not with the large exposure condition) has been falling in terms of capital (considering the median), and it has stood within a limited range and below the figures recorded in the previous IEF and also in a year-on-year comparison (see Chart B.4.2).

In general terms, the drop observed in these ratios occurred in a context of increase of Tier 1 capital in real terms at aggregate level (denominator) and decrease of the numerator in real

52 For further detail, see Basel Committee on Banking Supervision – Supervisory Framework for Measuring and Controlling Large Exposures.
53 See the Consolidated Text on Large Exposures to Credit Risk.
54 The supplementary rules include, among other, Credit Rating, "Financing to the Non-Financial Public Sector" and the additional requirements on capital (Minimum Capital Requirements for Financial Institutions). In turn, the regulation on Large Exposures to Credit Risk superseded the regulation on "Credit Risk Diversification" since the former became effective.

terms: higher share of SME credit (in contrast with loans to large companies), added to the effect of the migration of large debtors (classified as non-performing debtors) to off-balance items (bad debts), following the regulation.

Box 5: Financial Situation of Publicly-Traded Companies[55]

In the first three quarters of 2022, there was some improvement in the financial situation of this segment of the corporate sector. In particular, the final results in terms of equity (ROE) continued to recover —according to the median of the group—, consolidating the trend started by the end of 2021 (see Table B.5.1). There was an increase in net profitability margins[56] and in the ratio of sale volumes to assets (asset turnover ratio), while a decrease was observed in total leverage levels. Despite these improved ratios, the liquidity median contracted in the first nine months of the year, accompanied by a rise in the ratio of financial debt to operating income and an increase in the short-term financial debt relative to total debt. However, the median of the ratio of interest coverage to operating income showed some improvement over the period, with results more than doubling the amount of interest paid. Likewise, foreign currency mismatch (difference between assets and liabilities in currencies other than the peso relative to total assets, all of the above measured in domestic currency) continued to go down in 2022.

In the context of risk monitoring at systemic level, the liquidity, interest coverage and leverage ratios[57] were used to make a first simple identification of companies under a potentially more vulnerable situation and their relationship with the financial system. In this respect, the financial system's exposure to this subset of potentially more vulnerable companies is very limited: by the end of the third quarter of 2022, it accounted for less than 2% of the total portfolio of loans to companies by the financial institutions; likewise, this segment was showing a non-performance of only 0.24% against the total volume of financing granted by the institutions to companies.

Table B.5.1 | Publicly-traded companies – Selected ratios

	Quarters											
Selected indicators (median values):	**IV-19**	**I-20**	**II-20**	**III-20**	**IV-20**	**I-21**	**II-21**	**III-21**	**IV-21**	**I-22**	**II-22**	**III-22**
ROE: final results / net worth (%)	4.4	1.1	2.3	4.8	6.5	7.8	4.0	2.9	8.5	7.8	13.0	10.7
Net profits margin: final results / sales (%)	2.3	1.5	1.4	3.1	5.0	7.3	2.9	2.0	3.7	4.7	7.0	6.5
Assets turnover: sales / assets	65.3	64.5	61.2	53.2	46.5	45.8	45.9	47.1	47.8	48.9	46.8	48.9
Leverage: assets / net worth (%)	237.7	232.9	235.9	232.0	234.5	223.4	243.4	234.5	227.9	219.0	218.7	204.7
Acid test: (current assets - inventory) / current liabilities (%)	87.0	85.4	82.8	84.7	87.4	87.9	90.5	93.6	88.1	92.2	86.2	84.1
Interest coverage: operational results / paid interests	1.5	1.7	1.5	1.4	1.6	1.7	1.5	1.6	2.5	2.0	2.4	2.5
Financial indebtedness: (financial debt - cash) / operational results (%)	104.2	110.9	102.6	89.1	139.7	139.3	190.0	162.8	107.5	146.6	191.3	113.9
Financial debt term: short-term financial debt / total financial debt (%)	50.5	49.2	48.9	54.6	48.9	48.2	37.6	35.5	36.8	39.1	43.6	42.6
Currency mismatch: (foreign currency assets - foreign currency liabilities) / total assets (%)	-9.2	-7.2	-9.6	-8.4	-8.5	-8.3	-8.7	-8.5	-7.4	-6.2	-5.5	-5.9
Number of companies observed	**130**	**130**	**133**	**130**	**127**	**126**	**126**	**125**	**126**	**125**	**128**	**115**

Note: for those indicators that contain flow and stock variables, flow variables are taken with a cumulative carryforward of 4 quarters, while stock variables are taken as the average of the period considered. For the remaining indicators, the value at the end of the quarter is considered.

Source: BCRA based on CNV/BCBA.

55 The publicly-traded companies make up a segment of the domestic corporate sector characterized by firms of a large/medium relative size in terms of their assets. For further detail about coverage and methodology, see the sections on "Financial Situation of the Corporate Sector" in the IEF I-17, and "Financial Situation of Publicly-Traded Companies" in the IEF I-19.

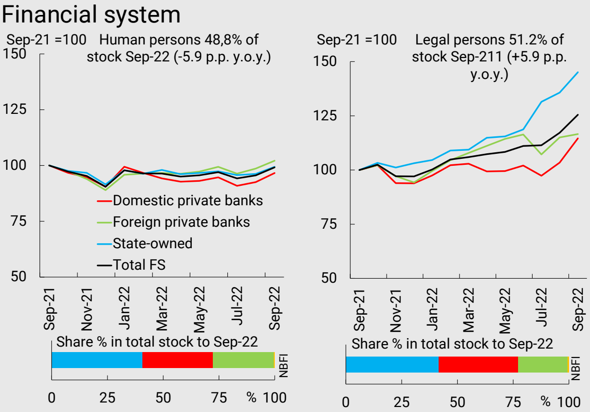
56 This also occurs in the 25 and 75 percentiles of the distribution of the ratio.

57 For further detail about the methodology, see "Financial Situation of Publicly-Traded Companies" in the IEF I-19.

Box 6 / Evolution of private sector time deposits in pesos and in UVA

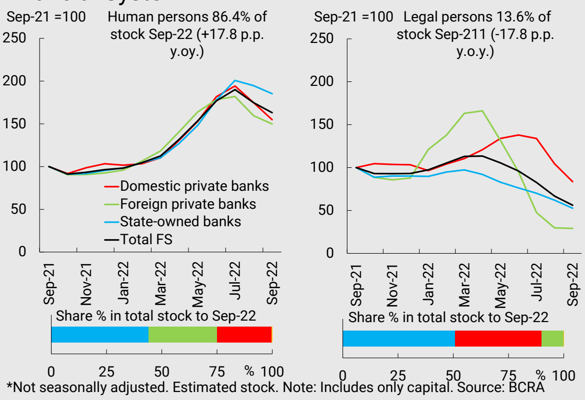
Since the publication of the previous IEF, the BCRA has raised the minimum nominal interest rates on time deposits in pesos and implemented new regulatory measures to promote saving in domestic currency in the financial system. These measures stated that (i) financial institutions are required to offer deposits denominated in UVA with an early cancellation option through all the channels in place; and that (ii) the maximum amount at which they are required to offer natural persons the minimum interest rate for time deposits in pesos (currently ARS10 million) includes both time deposits at a fixed rate and time deposits with early cancellation option in UVA (when their contractual term is shorter than 120 days). In this context, the stock of private sector traditional time deposits in pesos at a fixed interest rate has gone up 10.4% in real terms since the publication of the previous IEF (+11.1% y.o.y. in real terms), and accounted for 84.4% of total private sector time deposits in pesos in September and 42.5% of total deposits in domestic currency of this sector (+2.9 p.p. and +3.8 p.p. against April and in year-on-year terms, respectively). This performance was mainly driven by legal persons (explaining over 78% of the increase observed between April and September and growing 10.4% in real terms) and by state-owned financial institutions (see Chart B.6.1). Deposits at a fixed interest rate in pesos made by natural persons have also gone up over the period (4.3% in real terms), with a higher relative momentum in foreign private financial institutions.

Chart B.6.1 | Private sector time deposits in pesos at a fixed interest rate – In real terms *
Financial system



*Not seasonally adjusted.Estimated stock.Source: BCRA

Chart B.6.2 | Private sector UVA-denominated time deposits – In real terms *
Financial System



*Not seasonally adjusted. Estimated stock. Note: Includes only capital. Source: BCRA

In turn, private sector UVA-denominated time deposits also exhibited a positive performance —even though with some moderation on the margin— and grew 9.1% in real terms in the last five months (36.5% y.o.y. in real terms) (see Chart B.6.2). The evolution of these deposits has been mainly driven by natural personas (accounting for over 86% of these deposits), and by state-owned financial institutions (accounting for 44% of the total stock). Regarding legal persons, UVA-denominated deposits in domestic private banks continued to exhibit a higher relative growth in recent months, even though state-owned financial institutions still account for over half the total stock of UVA deposits.

4. Other Matters of the Financial System Stability

4.1 Domestic Systemically Important Banks (DSIBs)

As detailed in previous issues of IEF, the BCRA performs a special monitoring on a group of institutions with a higher relative importance in the domestic market following a systemic risk approach. These institutions are subject to verification of an additional capital conservation buffer higher than that of the remaining institutions (1% of risk-weighted assets (RWAs) above the requirement for the remaining institutions, which stands at 2.5% of RWAs). In order to identify the group of domestic systemically important banks (DSIBs), the BCRA timely used a series of ratios to establish a categorization based on various features (such as size, degree of interconnectedness, complexity and degree of substitutability of its business).[58]

In terms of size, DSIBs' total assets exceeded slightly half the total assets of the financial system as of September, and this share increased slightly against the previous IEF. Liquidity ratios of the DSIBs group have gone up against the previous IEF, from lower levels than those recorded in the remaining financial system.

Table 3 | Main ratios of DSIBs soundness

	Sep-21	Apr-22	Sep-22
Liquidity			
Broad liquidity (%)	61.4	61.6	65.2
In $	55.3	56.0	60.5
In US$	87.1	89.7	94.1
Liquidity Coverage Ratio (1)	2.2	2.0	2.0
Net Stable Funding Ratio (1) (2)	1.8	1.7	1.8
Solvency			
Regulatory capital / RWA (%)	26.3	26.8	27.7
Regulatory capital / Loans net of provisions (%)	46.9	47.3	53.2
Excess regulatory capital / Loans net of provisions (%)	32.8	33.5	38.1
Leverage ratio (1)	13.5	14.1	15.0
Profitability			
ROE in homogeneous currency (%a.) (3)	11.4	12.1	13.9
Private sector credit			
Exposure / Assets (%)	33.3	33.7	30.8
Non-performing loan ratio (%)	5.2	4.0	3.5
Provisions / Loans to the private sector (%)	5.9	4.8	4.6
Public sector credit			
Exposure / Assets (%) (4)	17.6	19.2	19.9
Foreign currency position			
(Assets - Liabilities + Net undelivered purchases in foreign currency) / Regulatory capital (%)	14.6	18.8	42.2

(1) The Apr-22 column includes the latest available information, which corresponds to Mar-22 for these indicators. (2) Jun-22 last available data. (3) 12-month accumulated. (4) Position in government securities (excluding BCRA securities) + Loans to the public sector.

RWA: Risk weighted assets

Source: BCRA

58 For further detail about the methodology based on international standards, see here.

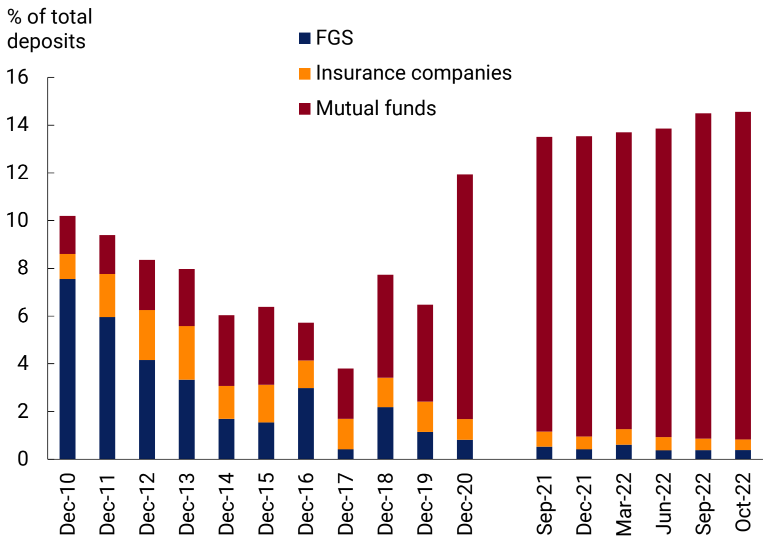
In turn, solvency ratios of DSIBs continued to stand at high levels and have increased if compared to the figures of last April (see Table 3). This rise was more moderate than the increase observed in the rest of the system. DSIBs continued to fully comply with the capital conservation buffer (including the abovementioned additional component specific to these institutions). Profitability ratios (ROE for the aggregate of the last 12 months) of the DSBIs group were positive and slightly higher than the ratios recorded by the rest of the financial system. In turn, the ROE accrued has increased for this group of institutions against the previous IEF and in a year-on-year comparison, while it contracted in the rest of the financial system.

Besides, the ratio of exposure to the private sector dropped in the DSIBs against the previous IEF (starting from slightly higher levels than those of the rest of the system), while it went up in the case of the other institutions. The non-performing ratio contracted against April, and stood at slightly higher levels than those of the remaining institutions of the financial system.

4.2 Interconnectedness in the Financial System

As to the analysis of interconnectedness of institutional investors [59] with the financial system, both sight and time deposits continue to be the main source of direct interconnectedness, as it has been typical over the last years. In recent months, there has been a slight increase in the share of these institutional investors' deposits in the financial system, and accounted for 14.5% of total deposits as of September 2022 (with a 0.8 p.p. increase against the value recorded six months ago) (see Chart 22). This occurred in a context where the portfolios managed by these institutional investors were on the rise. Keeping things in perspective, their current share in the financial system's total funding via deposits almost doubles the average of the last 10 years, with

Chart 22 | Share of deposits from institutional investors in the financial system's funding



Note: for mutual funds and insurance companies, deposits data published by BCRA

59 In terms of the value of the managed portfolio, the most important institutional investor at domestic level continues to be the Guarantee Sustainability Fund, followed by Mutual Funds and by insurance companies.

an increasing preeminence of Mutual Funds (*Fondos Comunes de Inversión - FCI*), mainly due to a remarkable growth of Money Market Mutual Funds.[60]

Since the publication of the previous IEF, the performance of the Mutual Funds industry has been volatile. There were drops in real terms in the assets under management in some months, mainly due to (net) redemptions of funds during stress episodes by mid-year in the financial markets, which were offset in part by months with sound net underwritings (and valuation growth). Even though the net worth of their managed portfolio went up 1.5% from June to October 2022, it has also recorded a 5.6% drop since late 2021 —in real terms in both cases. Consequently, the increase in direct interconnectedness is mainly due to a reallocation of portfolios in favor of Money Market Mutual Funds,[61] given the significant share of bank deposits in this type of funds, mainly to the detriment of the Fixed Income Mutual Funds (see Exhibit 4).

In terms of the degree of direct interconnectedess between the institutions participating in the financial system, and based on the monitoring of the unsecured inter-financial loans market (call money market),[62] there has been a decrease in recent months in the amounts traded and a contraction in the average spread of the interest rate agreed on top of the BADLAR rate, within a context of monetary policy rate rises and an increase in the BADLAR rate. Against this backdrop, the evolution of the ratios estimated with the network analysis methodology also reinforces the assessment of a lower degree of direct interconnectedness if compared to the previous period, even though some increase is observed in a year-on-year comparison.[63]

60 See "Exhibit 5 / Evolution of the Mutual Funds (FCI) Industry and Its Interconnectedness with the Financial System" in IEF of the First Half of 2021 (IS-21).

61 The performance of the Money Market Mutual Funds occurred in a context of increase in deposits from natural persons and related to payment service providers. See Financial Inclusion Report, October 2022.

62 Even though this market is small in relative terms, with an average traded amount per day equivalent to less than 1% of the private sector stock of deposits and decreasing on the margin, it is still relevant in terms of the signs it can provide because of its use by the institutions for liquidity management.

63 For example, there has been a decrease in recent months in the number of nodes, which refers to the number of financial institutions participating in the market (it went down from 67 by the end of June to 55 in November). There is also a reduction in the number of linkages and in the density of the network against the previous period. For the definition of these concepts and the main terminology used for the network analysis, see Exhibit 3 of IEF II-18 and Section 4 of IEF I-19.

5. Main Macroprudential Policy Measures

As presented throughout this IEF, in the second half of 2022, the BCRA has continued to reinforce its macroprudential policy, seeking to moderate any potential vulnerabilities of the financial system as well as to consolidate the hedging of the sector upon any eventual stress episodes.

The main pillars of the BCRA's macroprudential policy continued to be as follows:

i. Keep the stimulus for lending to the private sector, especially lending channeled to MSMEs. With a view to continuing encouraging the access to credit facilities at subsidized interest rates for MSMEs, in October 2022, the Central Bank established a new quota for the "Credit Line for Productive Investment" (LFIP) of MSMEs for the 2022/2023 period, with characteristics similar to those currently in effect (see Box on Bank Lending to SMEs and "Credit Line for Productive Investment"). In addition, in November, the BCRA launched the "Database of MSME Electronic Credit Invoices Not Paid Upon Maturity (CenFIV)", seeking to consolidate MSME Electronic Credit Invoices (FCEMs) as an instrument for the financing of MSMEs (see Regulatory Annex).

ii. Gauge the monetary policy interest rates (and time deposit interest rates) with a view to positive real yields in investments in pesos. Since the previous issue of the IEF, the BCRA raised on several occasions the percentages applicable to determine the minimum guaranteed interest rates for time deposits. In parallel, and seeking to encourage the taking of time deposits, the Central Bank adopted some regulatory measures and stated that (i) financial institutions are obliged to offer deposits denominated in Units of Purchasing Power (UVAs) and with an early cancellation option, through all channels available; and that (ii) the maximum amount at which financial institutions are obliged to offer the minimum interest rate for time deposits in pesos (currently ARS10 million) comprises —on a jointly basis— deposits at a fixed rate and deposits with an early cancellation option denominated in UVA (provided that the contractual term for such deposits is shorter than 120 days).

iii. Encourage financial institutions to keep adequate solvency levels. Against this backdrop, looking into 2023, the BCRA reviewed the possibility for financial institutions to distribute dividends, in line with the decisions made in this respect for 2020 and 2021.

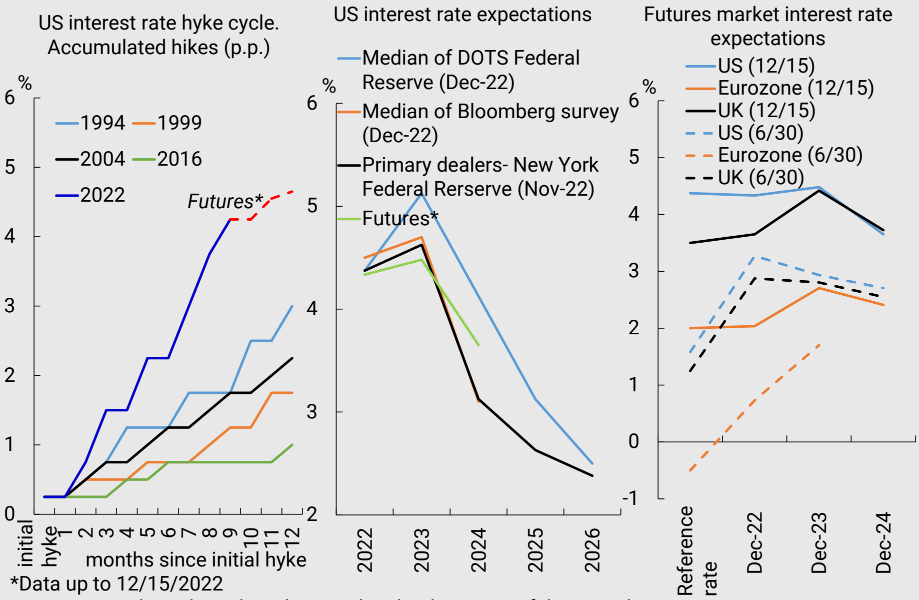
iv. Keep without changes (at 0%) the level of the Countercyclical Capital Buffer required to financial institutions, in a context of weak performance by financial intermediation (see Section 3.2).

v. Adjust the foreign exchange regulations and the standards applicable to financial institutions so as to adapt them to the needs of the current context and make a more efficient use of international reserves, and consequently avert any potential temporary supply and demand imbalances in the exchange market.

Exhibit 1 / Monetary Policy Interest Rate Rises in Developed Economies and the Impact on Financial Markets of Emerging Economies

Upon the increase of inflationary pressures worldwide (accelerated by the impact of the armed conflict in Ukraine on commodity prices), a general upward trend has been observed as regards monetary policy interest rates. Among developed economies, the US case stands out, given the intensity of the change in its monetary policy bias and the relevance of the US dollar in international financial markets. The Federal Reserve (FED) started to raise the interest rate in March 2022 and has already accrued 7 increases in nominal terms (from 0%-0.25% up to 4.25%-4.50%),[64] which have been more marked than in previous cycles of interest rate rises (taking into account the current context in terms of inflation observed and expectations as to such inflation) and also more marked than originally expected (see Chart E.1.1). Thus, by virtue of the interest rate increases and the prospects communicated by the FED, added to measures aimed at balance sheet reduction (quantitative tightening – QT)[65], the expectations of the market have adjusted to the policy interest rate forward guidance. At present, additional increases are anticipated for 2023 (up to levels close to 5%), followed by ongoing reductions. In practice, the peak of the interest rate rises will depend upon how persistent inflation turns out to be.[66] Against this backdrop, from late February to mid-December, there were some widespread increases in the yields of the US Treasuries (close to 280 and 170 basis points (bp) for 2-year and 10-year instruments, respectively, and an expected volatility for them standing at levels unseen since the COVID-19 shock), added to an acceleration of the US dollar appreciation against a basket of the main currencies, which —by the end of September— reached the maximum values on record since 2002.

Chart E.1.1 | Interest rates – USA and other developed countries

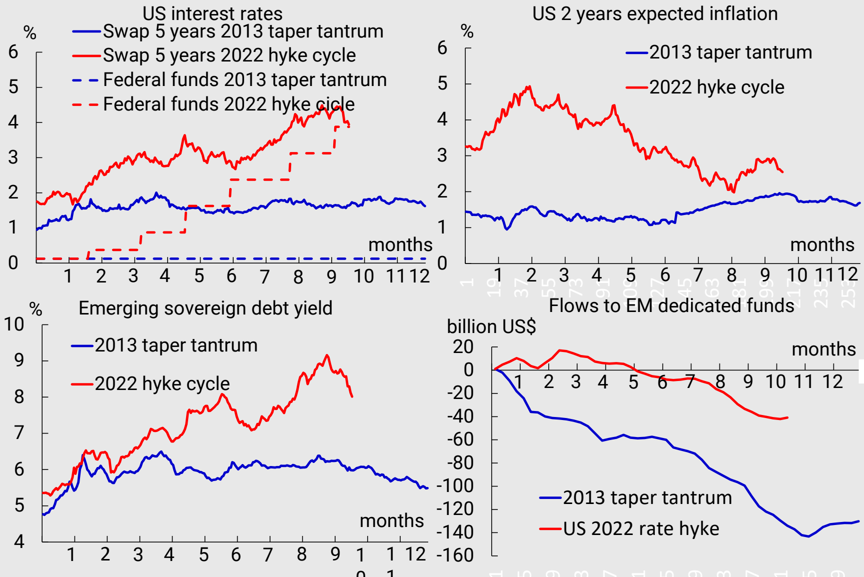


*Data up to 12/15/2022
Source: BCRA based on Bloomberg and Federal Reserve of the United States.

64 While the ECB and the Bank of England implemented monetary policy interest rate rises ranging from 250 bp to 350 bp.
65 The FED started in June with the contraction of its balance sheet at a pace of USD47.5 billion/month. As from September, the reduction pace accelerated to USD95 billion/month.
66 Interest rate futures show that market analysts consider that the federal funds rate will reach its maximum value by mid-2023 (around 5%) to then start a gradual reduction path.

The adverse financial conditions globally affected both the portfolio flows and the prices of emerging economies' financial assets and the prices of their currencies even though, so far, this has not resulted in any disruptive events.[67] Funds specializing in assets from emerging economies have recorded estimated outflows of USD49 billion since April, even though they have been below the levels recorded in other unwinding episodes which impacted on emerging markets in recent years (see Chart E.1.2).[68] [69] In this context, emerging economies' currencies have depreciated over 6% since late March, as per the Emerging Market Currency Index (EMCI), but with dissimilar performances across countries.

Chart E.1.2 | Interest rates – USA and emerging markets



Source: BCRA based on Bloomberg, J.P. Morgan and Standard Chartered (based on EPFR).

In turn, the overspread required for emerging markets' sovereign and corporate bonds in US dollars has widened nearly 10 bp and 30 bp (according to EMBI and CEMBI, respectively) since late March 2022, but they stand at levels not so far from their historical averages. With increasing yields on US Treasuries and a rise in debt spreads, during the second and third quarters of 2022, the issues of emerging markets' bonds —sovereign and corporate debt— in international markets posted year-on-year declines within a range of 60%-75% (starting from historically high levels). In those quarters, there have been just a few sovereign debt transactions from countries having no investment grade. In turn, the yield on emerging markets' bonds in domestic currency (GBI) rose from 6.2% by late March up to 6.8% by mid-December, and, in October, it reached the maximum values since the international financial crisis with a peak in 2008-2009.

The interest rate increase episodes in international markets pose a challenge to financial stability in emerging economies (with a dissimilar impact depending on the context where they occur).[70]

67 A situation of these characteristics would entail, for instance, an eventual widespread and disorderly unwinding of positions.
68 Like the shock due to COVID-19 (around USD80 billion) and the episode of expectations adjustment with respect to the tapering of the Federal Reserve in 2013 (US$145 billion from mid-2013 to the end of the first quarter of 2014).
69 It is worth highlighting that in 2022 the outflows are more marked from funds specializing in bonds (unlike the two previous outflow episodes already mentioned). In addition, more recently and on the margin, in the second fortnight of November, net inflows were recorded to funds specializing in both equities and emerging market bonds.
70 For example, interest rate rises upon increasing inflation in developed economies or as a response to a shock in these economies (changes in investors' perspectives) would have a less benign impact on emerging markets than those related to issues of the real

From a financial standpoint, this is related to the fact that part of the emerging economies' financing comes from abroad and is denominated in foreign currency. The impact on the cost of borrowing and the prices of securities in foreign currency usually occurs in a context of pressure on the capital flows[71] and, consequently, on the exchange markets (thus additionally increasing the burden of receivables in foreign currency), with a potential impact on domestic debt markets at large. In the current context, the resulting uncertainty is even greater, due to the lesser expectations about global growth (with widespread and marked rises in monetary policy interest rates and with no certainty as to when the peak of this increase cycle will occur) and volatility in commodity prices.

Moreover, the risks faced are compounded by vulnerabilities that became deeper and deeper after a long period of low interest rates. On the one hand, the rise in non-bank financial intermediation (NBFI) worldwide, led by investment funds, renders portfolio flows more vulnerable to changes in international market conditions, driving eventual spillover effects —with greater impact on shallow markets— and amplifying the international financial cycle. An increased presence of investment funds creates more interconnectedness among markets and jurisdictions and, at the same time, their liquidity mismatches (and, in certain cases, their leverage) lead liquidity conditions in the main financial markets to play a determining role.[72] In addition, the significant appreciation observed in the prices of several markets makes them more sensitive to eventual price corrections (in some cases, related to factors external to the relevant markets), even after the contractions recorded in recent months. On the other hand, the widespread rise in indebtedness of both companies and governments in recent years render them more vulnerable upon interest rate rises. This may eventually trigger widespread concern about the sustainability of companies' or governments' debt (with reductions in their risk rating) or specific cases of default resulting in an increased risk aversion that may trigger an unwinding of positions in emerging markets' instruments, in addition to any potential effects on banks. Finally, an outstanding effect of the COVID-19 shock is that emerging economies have less room to maneuver in the counter-cyclical use of the fiscal policy.

Against this backdrop, it becomes crucial to monitor both the evolution of monetary policies in developed economies (and their impact) and the expectations regarding such policies. Any problem when gauging these policies and/or when communicating them might result in abrupt changes in perspectives as to how intense this interest rate increase cycle will be and how long it will last, with eventual disorderly responses in financial markets and potential spillover effects on emerging economies.

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economy (prospects of an increase in the level of activity). See, for instance, "How Do Rising U.S. Interest Rates Affect Emerging and Developing Economies?" (World Bank, 2022).

71 Even though the experience is diverse, upon interest rates increase cycles in developed economies, the flows of capitals to emerging markets tend to be more affected after a significant portion of the cycle has elapsed or once the cycle has concluded. See Exhibit 1 "Expectations about the US Monetary Policy and its Impact on Emerging Economies' Assets" of the IEF of the second half of 2014.

72 In the face of more adverse conditions, the possibility of a forced unwinding of positions in different instruments to cover redemptions in the investment funds industry is accompanied by the effect of liquidity needs to deal with the rebuilding of margins in derivatives markets. For further information about the discussion on the NBFI sector at large (and on how to face the systemic risk generated) and the working agenda raised globally, see a document recently published by the FSB on "Enhancing the Resilience of Non-Bank Financial Intermediation: Progress report".

Exhibit 2 / Policies to Address the Situation of Households that Have Taken UVA-Adjusted Mortgage Loans

In a scenario characterized by increasing financial volatility and a drop in the output of the economy, the Federal Government jointly with the BCRA started to implement a set of measures by mid-2019 aimed at debtors who have taken mortgage loans adjusted by units of purchasing power (UVAs).[73] Even though this type of loans allowed for greater housing affordability from 2017 to 2018, they also created greater exposure of households to eventual adverse macroeconomic contexts. Scenarios with these characteristics held true in the second half of 2018 and during 2019, and they worsened upon the impact of the COVID-19 pandemic on domestic economy.

The policy measures adopted sought to moderate an excessive growth of the financial burden originated in the above-mentioned loans. Against this backdrop, out of the 95,270 households who have run into debt originated in UVA-adjusted mortgage loans (September 2022), only 1.6% post a certain level of non-performance (1.3% in terms of stock), and these delinquency levels are standing below the levels recorded in aggregate loans to households (3% in terms of stock) and to the private sector as a whole (3.1%). Households subject to this type of lending account for less than 1% of the total of households borrowing funds from the financial system.

These are the main policy measures adopted:

i. Between September 2019 and January 2020, the value of installments was frozen for debtors who had taken loans up to 120,000 UVAs —at the time when the loan was granted.
ii. By means of Law 27541 on Social Solidarity and Productive Reactivation, in early 2020, the BCRA designed a convergence scheme to address the situation of the freezing so as to prevent any sudden leaps in the value of installments. This scheme respected the principle of "shared efforts" set forth in the Law, and the effect was to be absorbed by the Federal Government, the debtors and the financial institutions as well (Communication "A" 6884).
iii. Upon the COVID pandemic, the provisions of Executive Orders No. 319/20 and No. 767/20 established a new freezing of installments from April 2020 up to early 2021, covering all UVA-adjusted mortgage loans for housing purposes. Then, a new gradual convergence scheme was set for the contractual value of the installments, for a term of a year and a half.

Chart E.2.1 shows a theoretical exercise exhibiting the effect of the freezing and convergence measures stated above on the installments of a UVA-adjusted mortgage loan taken in December 2017 to purchase a piece of real property.[74] Given the data available, it assumes the acquisition of a 3-room apartment (70 m^2) in a neighborhood in the Autonomous City of Buenos Aires (CABA), comparing the evolution of the installments of the UVA-adjusted mortgage loan with an estimate

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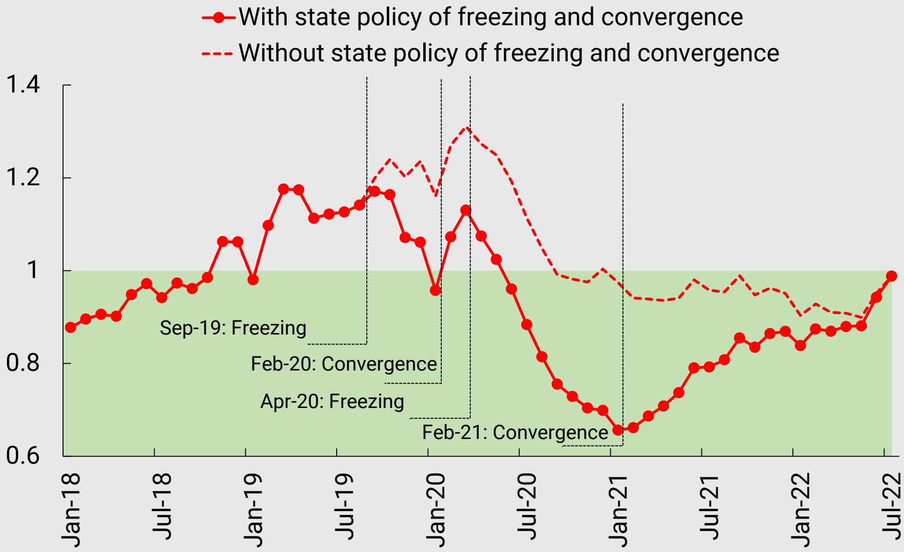
73 Three fourths of them correspond to state-owned financial institutions.
74 The transaction assumes that the debtor takes a loan denominated in UVAs for 75% of the price of the piece of real property, subject to the conditions of interest rate and average term arranged in the month of granting, and the first payment is made the following month.

of the cost of renting a similar apartment.[75] Then, a calculation is made of the monthly ratio of loan installment to rent, considering a scenario where the freezing and convergence measures had not been taken. This exercise shows a significant financial relief for debtors in the period from late 2019 to mid-2022.

Chart E.2.1 | UVA-adjusted mortgage loan. Exercise: Theoretical installment with and without government intervention v. rent (%)



In turn, the BCRA established that, from April 2020 to March 2021, financial institutions had to include the unpaid installments corresponding to maturities occurring within such period at the end of the lifetime of the loan, only considering the accrual of the compensatory interest rate. Even though this measure covered all credit facilities, the client could opt either for this scheme or for the above-stated scheme (freezing and convergence) in the specific case of UVA-adjusted mortgage loans on a single housing unit

Executive Order No. 767/20 also instructed that financial institutions had to offer, until mid-2022, facilities for debtors whose installment exceeded 35% of their income. Under this scheme, financial institutions received 1,573 applications from clients under mortgage loans, out of which:

a. 1,092 (69.4%) were rejected, 366 were approved (23.3%), 109 (6.9%) were still under analysis, and the other applications were withdrawn by the applicant;
b. In the case of rejected applications, financial institutions reported that 72.2% of them failed to properly meet the requirements for reporting the income, and 13.8% exhibited a installment to income ratio below 35%, whereas for the remaining 14% other reasons were stated (for example, ownership of more than one housing unit);
c. In the case of approved applications, 57.9% of them received the benefit of refinancing, 41% received a rebate, and the remaining 1.1% received a combination of both benefits.

75 The data on rent and m2 price have been taken from the General Directorate of Statistics and Censuses of the Autonomous City of Buenos Aires (CABA).

Exhibit 3 / Evolution of Households' Indebtedness as per Income Level

The aggregate indebtedness of Argentine households with the financial system is currently equal to 4% of GDP (see Section 3), a level which is relatively low if compared to historical values —it reached almost 7% four years ago—, and vis-à-vis other emerging and developed economies. Added to this, the burden of households' debt services is also standing at moderate levels —just above 10% of the annual wage bill—, which impacts on sustaining the payment capacity of this sector. These developments are in line with the low levels of non-performing loans, thus moderating this associated source of vulnerability for financial institutions.

That notwithstanding, even though this analysis makes it possible to have a broad vision on the segment of households in economy, it only provides a perspective based on average values. In other words, we might be losing sight of some heterogeneous features which become apparent when breaking down the different strata of household income. As a result, to make a more accurate diagnosis of the sector's leverage and identify potential sources of vulnerability, a follow-up was conducted in previous issues of the IEF[76] on the level of relative indebtedness of households as per income level. Using a similar methodology, Chart E.3.1 analyzes the evolution of indebtedness by income strata between the end of the third quarter of 2019 and the same period of 2022, upon overcoming the most critical stage of the impact caused by the COVID-19 pandemic during 2020 with the subsequent recovery of domestic economy.

Chart E.3.1 | Indebtedness ratios by income and non-performance

Note: the deciles were built without considering the 10% with the lowest income. Source: BCRA.

As it may be observed, between ends of the period, and taking into consideration information about slightly over 5.3 million of persons working under a contract of employment who have

76 For further detail, see Exhibit 2 "Analysis of Households' Indebtedness based on Debtors' Database Microdata" of IEF I-19 and Exhibit 3 "Households' Indebtedness by Income Level" of IEF II-16).

taken some type of loan with the financial system, a drop in the ratio of debt stock to salaries has been observed in general with the exception of the first decile of income.[77] Thus, at present, this ratio stands at 302% in the second decile of income (i.e., equivalent to 3 monthly salaries), below the value recorded 4 years ago, with a downward path to 165% in the tenth decile of higher income, also slightly below the value recorded in the same month in 2019.

Based on the analysis, the non-performance levels have also shrank in recent years in all household income strata (with a maximum level of 4.3% in the second decile of income and a minimum of 0.9% in that of higher income), thus standing below the non-performance ratio of those households which, even though they owe some type of debt to the system, receive no income under an employment relationship (around 6.3 million people, including self-employed and non-employees, with an aggregate non-performance of 5% at the end of the third quarter of 2022 —below the value recorded in the third quarter of 2019).

This monitoring shows that any potential vulnerabilities coming from the various household income levels are limited, even though this should be followed up, even considering other sources of non-bank indebtedness.

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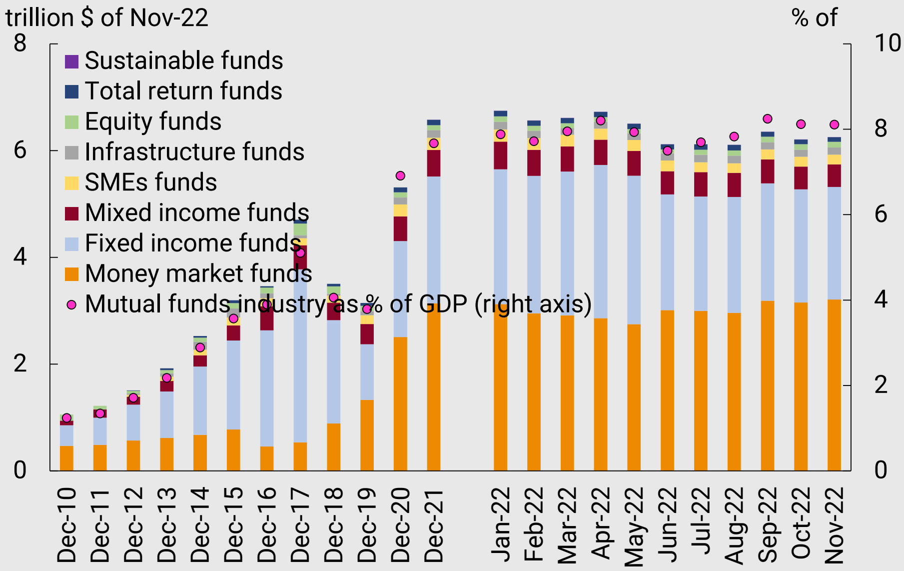
77 Net salaries corresponding to the month indicated in the chart.

Exhibit 4 / Recent Trends in Mutual Funds (*Fondos Comunes de Inversión -FCIs*)

As of November 2022, the net worth (NW) managed by mutual funds (FCIs) amounted to ARS6.3 trillion (see Chart E.4.1), equivalent approximately to 8.1% of GDP.[78] Throughout the year, mutual funds exhibited a volatile performance as a result of new underwritings and redemptions recorded, thus accumulating a drop of 5%[79] in real terms since December 2021(-6.5% y.o.y.). Money Market Mutual Funds, with the highest share in the industry (51% of the total), have posted a growth of 2.2% in real terms since the end of 2021. In the case of Fixed Income Mutual Funds, the NW contracted 11%, while a decrease was observed as well in Mixed Income Mutual Funds (15%) and SME Funds (20%), following in order of relevance. Green mutual funds, also called Sustainable Investing Funds, which started in 2021 with one (1) operating fund,[80] posted a growth of 145% up to November 2022 and reached a number of 7 funds, even though they account for less than 1% of the NW of the industry.

Chart E.4.1 | Evolution of mutual funds industry per type of fund and industry size



Source: BCRA based on CAFCI.

Among the main trends in 2022, it is worth stating that, in a context of increasing uncertainty, there was an unwinding of positions in Argentine Government Securities by mid-year, especially CER-adjusted instruments, with an impact on sovereign yield curves in pesos. This coincided with the redemptions in unit shares of Fixed Income Mutual Funds in June and July. To respond to

78 The Mutual Funds industry is the second main institutional investor in Argentina, following the Sustainability Guarantee Fund (FGS) (11.9% of GDP). See "Exhibit 5 / Evolution of the Mutual Funds (FCI) Industry and its Interconnectedness with the Financial System" in IEF I-21.

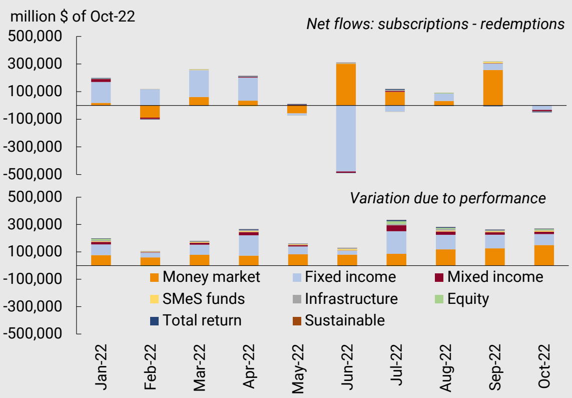
79 Changes in homogeneous currency will be considered in all cases, except otherwise stated.

80 The National Securities Commission (CNV) regulated the operation by means of General Resolution (RG) 885/2021 and created a special regime for these funds. According to such regime, for a mutual fund to be "green" it must have at least 45% of investments (in terms of NW) in social, green and sustainable assets or trade within the panels authorized with environmental, social and governance best practices.

this event, the BCRA purchased Argentine Government Securities in pesos with a view to reducing volatility and align the yields with their macroeconomic fundamentals and determine a fair ratio to yields resulting from Treasury auctions.[81] The BCRA also adopted other measures in order to preserve financial stability, such as: offering financial institutions a put option on Argentine sovereign bonds;[82] opening of the liquidity window for mutual funds through overnight repo transactions;[83] and adjustment of interest rates in line with the Objectives and Plans Report for 2022, within the framework of the regularization process of the monetary policy currently in progress (see Section 1).

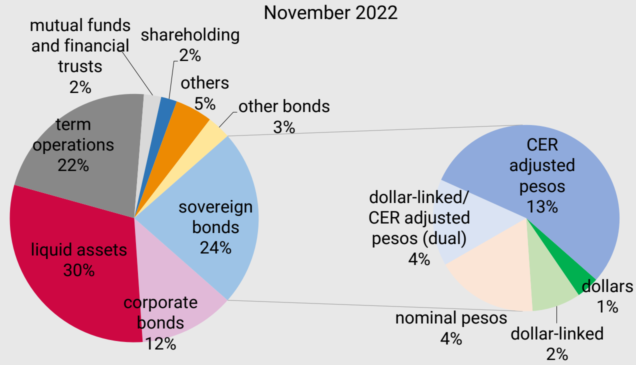
As a result of the stress episodes, Fixed Income Mutual Funds, which had been recovering since June 2021 and accumulated significant net underwritings until May 2022,[84] recorded net redemptions between June and July equivalent to 20% of the NW under management and 8% of the total industry (see Chart E.4.2). Part of the drop was offset by the reallocation of portfolios in favor of Money Market Mutual Funds, by investors who prioritized liquidity. This shift entails a greater direct interconnectedness between mutual funds and financial institutions as stated in Section 4.2. In terms of the portfolio composition by assets, there was an increase in the share of liquid assets and time transactions (and they went from 45% in May to 52% in November 2022), consisting mostly in sight deposits and time deposits, respectively. The unwinding of positions adjusted by CER led to a reduction in the weight of Argentine Government Securities in the portfolio of the industry at large and, specifically, in Fixed Income Mutual Funds (whose investments in sovereign bonds account for more than 80% of investments in the industry). The share of Argentine sovereign bonds went from 33% of the total industry portfolio in May 2022 to 24% in October 2022 (see Chart E.4.3), and CER-adjusted instruments accounted for 14% of the

Chart E.4.2 | Net flows (underwritings-redemptions) and yield change per mutual fund type



Source: BCRA based on CAFCI.

Chart E.4.3 | Portfolio composition of the Mutual Funds industry



Source: BCRA based on CAFCI.

81 See "Exhibit 5 / Intervention by the BCRA in the Debt Market in Pesos" in IPOM – September 2022.
82 For those awarded since July 2022 and maturing before the end of 2023, Communication "A" 7546.
83 Communication "A" 7579. The interest rate for mutual funds is equal to 75% of the reverse repo interest rate for financial institutions. Put option on Argentine sovereign bonds for those awarded as from July 2022 and maturing before the end of 2023.
84 Such growth was also accompanied by the performance in terms of yields, so that the growth of NW of Fixed Income Mutual Funds exceeded the NW of the ensemble of Money Market Mutual Funds until April 2022. Thus, in May 2022, Fixed Income Mutual Funds exceeded, in terms of NW, the Money Market Mutual Funds (43% and 42% of the total industry as of May 2022) for the first time since August 2019, when the reprofiling of the Federal Government's debt took place (shares of 53% and 23%, respectively, in that month).

total (10% bills and 4% bonds) against 25% as of May 2022.

With respect to profitability,[85] the nominal yields of Money Market Mutual Funds went up in line with the rise of reference (benchmark) interest rates, even though the spreads against BADLAR rate at private banks narrowed in recent months. In real terms, a slight increase was observed at large, and rates were less negative in the case of both Money Market Mutual Funds and Fixed Income Mutual Funds.

85 Based on a sample of funds.

Abreviations and Acronyms

€: Euro
a.: Annualized.
AEIRR: Annual Effective Internal Rate of Return.
AFIP: *Administración Federal de Ingresos Públicos*. Argentina's Federal Tax Authority.
ANSES: *Administración Nacional de Seguridad Social*. Social Security Administration.
APR: Annual Percentage Rate.
ATM: Automated teller machine.
b.p.: basics points.
BADLAR: Interest rate for time deposits over one million pesos between 30 and 35 days for the average of financial institutions.
BCBA: *Bolsa de Comercio de Buenos Aires*. Buenos Aires Stock Exchange.
BCBS: Basel Committee on Banking Supervision.
BCRA: *Banco Central de la República Argentina*. Central Bank of Argentina.
BIS: Bank of International Settlements.
BoE: Bank of England.
Bonar: *Bonos de la Nación Argentina*. Argentine National Bonds.
CABA: *Ciudad Autónoma de Buenos Aires*. Autonomous city of Buenos Aires.
CCP: Central counterparty.
CDS: Credit Default Swaps.
CEMBI: Corporate Emerging Markets Bond Index
CER: Coeficiente de Estabilización de Referencia. Reference Stabilization Coefficient.
CNV: *Comisión Nacional de Valores*. National Securities Commission.
CPI: Consumer Price Index.
CVS: *Coeficiente de Variación Salarial*. Wage variation coefficient.
D-SIBs: Domestic systemically important banks.
DEBIN: *Débito Inmediato*. Immediate Debit.
ECAI: External Credit Assessment Institution.
ECB: European Central Bank.
ECC: *Encuesta de Condiciones Crediticias*. Lending standards survey.
EMBI: Emerging Markets Bond Index.
EPH: *Encuesta Permanente de Hogares*. Permanent Household Survey.
EU: European Union.
Fed: Federal Reserve of US.
FGS: *Fondo de Garantía de Sustentabilidad*. Sustainability Guaranty Fund.
FSB: Financial Stability Board.
GDP: Gross Domestic Product.
IADB: Inter-American Development Bank.
IAMC: *Instituto Argentino de Mercado de Capitales*. Argentine Capital Markets Institute.
IBIF: *Inversión Bruta Interna Fija*. Gross domestic fixed investment.
IMF: International Monetary Fund.
INDEC: *Instituto Nacional de Estadísticas y Censos*. National Institute of Statistics and Censuses.
IPMP: *Índice de Precios de las Materias Primas*. Central Bank Commodities Price Index.
IPOM: *Informe de Política Monetaria*. Monetary Policy Report.
IRR: Internal Rate of Return.
LCR: Liquidity Coverage Ratio.
Lebac: *Letras del Banco Central de la República Argentina*. BCRA Bills.
LETES: *Letras del Tesoro en dólares estadounidenses*. US$ Treasury Bills.
LIBOR: London Interbank Offered Rate.
LR: Leverage Ratio.
MAE: *Mercado Abierto Electrónico*. Electronic over-the-counter market.
MEP: *Medio Electrónico de Pagos*. Electronic Means of Payment.
MERCOSUR: *Mercado Común del Sur*. Southern Common Market.
MERVAL: *Mercado de Valores de Buenos Aires*. Executes, settles and guarantees security trades at the BCBA.
MF: Mutual Funds.
MoT: Ministry of Treasury.
MSCI: Morgan Stanley Capital International.
MULC: *Mercado Único y Libre de Cambios*. Single free exchange market.
NBFI: Non-Bank Financial.
NPD: National public debt.
NFPS: Non-financial national public sector's.
NW: Net worth.
OB: *Obligaciones Negociables*. Corporate bonds.
OECD: Organization for Economic Cooperation and Development.
OPEP: Organization of the Petroleum Exporting Countries.
PEN: *Poder Ejecutivo Nacional*. Executive Branch.
PGNME: *Posición Global Neta de Moneda Extranjera*. Net Global Position in Foreign Currency.
p.p.: Percentage point.
PPM: *Plataforma de Pagos Móviles*. Mobile Payment Platform.
REM: *Relevamiento de Expectativas de Mercado*. BCRA Market expectation survey.
ROA: Return on Assets.
ROE: Return on Equity.
Rofex: Rosario Futures Exchange.
RC: Regulatory capital
RWAs: Risk Weighted Assets.
S&P: Standard and Poors.
s.a.: Seasonally adjusted.
SEFyC: Superintendence of Financial and Exchange Institutions.
SME: Small and Medium Enterprises.
TCR: *Tipo de cambio real*. Real Exchange rate.
TN: *Tesoro Nacional*. National Treasury.
US$: United States dollar.
US: United States of America.
UTDT: *Universidad Torcuato Di Tella*. Torcuato Di Tella University.
UVA: *Unidad de Valor Adquisitivo*. Acquisition Value Unit.
UVI: *Unidad de Vivienda*. Dwellings Unit.
VAT: Value Added Tax.
WB: World Bank.
WPI: Wholesale Price Index.y.o.y.: year-on-year.