FINANCIAL STABILITY REPORT

Second Half 2022

SBP
Superintendencia
de Bancos de Panamá

25 años
1998 - 2023

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I. Foreword

The Financial Stability Report for the second half of 2022 is drafted following the Superintendency of Banks of Panama's approach and presents a macro financial point of view. The report analyzes all the socio-economic variables that affected the results of the National Banking System (SBN, for its acronym in Spanish). More than two years after the onset of the COVID-19 pandemic, the economy performed impressively in terms of recovery. The best economic performance at the end of 2022, despite the Russia-Ukraine war, which has caused an international economic impact, as well as inflationary expectations and interest rate hikes set by the Fed, showed the Panamanian productive sector's ability to overcome difficult times and to obtain reasonable economic growth figures by 2023, although not at the levels projected in late 2022. Additionally, we have identified other macro financial risks that will be discussed in section IV.

This paper reveals that, in turn, the indebtedness performance, both at the corporate and household levels is higher than that of the GDP-to-debt ratio. The sectoral loan distribution shows the greater weight that retail banking has, which puts significant pressure on the economic system, as the productive sector sustains the financial viability of households and, in turn, has been losing credit stakes if compared to that of consumption. As for market movements and periodic interest rate hikes, both by the Fed as by the central banks worldwide, we present an analysis of the impact of interest rate hikes on our market and the performance of the entities that make up the SBN, the performance of the real estate sector, and the impact of macroeconomic variables on the solvency ratio. The analysis displays that the financial system, at the aggregate level, would remain resilient, at the face of an unexpected economic scenario, as well as at the face of potential severe domestic and international shocks. The SBN has demonstrated its robustness despite the impact triggered by the pandemic, however, when facing these disturbances, the difference in the financial capacity of entities with better financial soundness indicators is observed.

It is important to emphasize that the regulatory framework adopted in recent years to strengthen the financial system's stability, in terms of equity strength, addresses Basel recommendations, by requiring higher-quality capital elements, in line international standards such as Basel III. Regarding the results of the sensitivity analysis conducted on liquidity, we observed that the SBN maintains adequate resilience levels to face deposit outflows, which could occur in worst case scenarios, where the percentage of availability would allow it to absorb a significant outflow of deposits. The resistance to liquidity shocks in most entities is supported by the adequate distribution of assets and liabilities by maturity terms, in the sufficiently diversified funding structure, and in the high-quality liquidity assets that were set to comply with the liquidity coverage ratio (LCR) requirement. This year we present the results of a survey where the medium-term coverage ratio concluded that the national banking system has enough medium-term resources to face contractual obligations during this period. Likewise, we included a compendium of regulations that are intended to be addressed in the next two years.

II. Domestic and International Context

1. International Activity

During the second half of 2022, the global economic environment showcased a moderate growth rate compared to the previous half, marked by a high asymmetrical level between economies. The foregoing was mainly because of interest rate hikes in the monetary policy of central banks to battle inflation and the Russia-Ukraine war, elements that continue to adversely affect economic activity. Similarly, the fastest spread of COVID-19 in China slowed growth in 2022, but the recent reopening [of the Chinese market] has provided room for an environment where economies could grow more in 2023.

Global growth is expected to decline an estimated of 3.4% in 2022 and 2.9% in 2023, before rebounding to 3.1% in 2024. The outlook for 2023 is 0.2 percentage points higher than forecasted by October 2022 edition of the World Economic Outlook report, but below the historical average (2000-19) of 3.8%. And although the most recent forecasts for this year from various international organizations point to better results than previously forecasted, the risk balance is still present and would put relevant pressure from the external context.

Table II.1: GDP Growth Forecasts
Annual difference in %

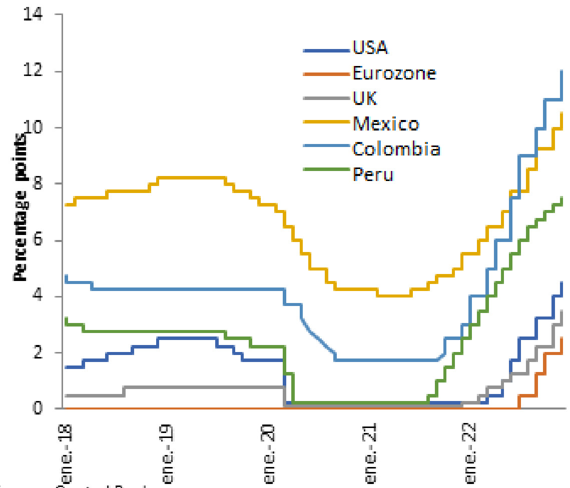
Region	2022 (IMF)	Projections Jan. 2023		Projections Diff. Oct 2022	
		2023	2024	2022	2023
Global GDP	**3.4**	**2.9**	**3.1**	**0.2**	**-0.1**
Developed economies	**2.7**	**1.2**	**1.4**	**0.1**	**-0.2**
United States	2.0	1.4	1.0	0.4	-0.2
Euro Zone	3.5	0.7	1.6	0.2	-0.2
Japan	1.4	1.6	0.9	0.2	-0.4
United Kingdom	4.1	-0.6	0.9	-0.9	0.3
Emerging economies	**3.9**	**4**	**4.2**	**0.3**	**-0.1**
China	3.0	5.2	4.5	0.8	0.0
India	6.8	6.1	6.1	0.0	0.0
LATAM	3.9	1.8	2.1	1.7	-0.4
Brazil	3.1	1.2	1.5	0.2	-0.4
Mexico	3.1	1.7	1.6	0.5	-0.2
Panama	**10.8**	**5**	**4**	-	.

Source: WEO (IMF)

Global inflation is expected to fall from 8.8% in 2022 to 6.6% in 2023 and to 4.3% in 2024, levels still higher than those observed before the pandemic (2017-19), of around 3.5%. However, headline inflation is forecast to remain persistently high, which has required sharp monetary tightening in several economies. Global inflation has reached the highest figures in recent decades, partly due to the early withdrawal of fiscal and monetary stimulus to face the pandemic, especially in developed economies. Added to this was the conflict in Eastern Europe, after Russia's invasion of Ukraine. This unexpected event represented an adverse shock for the world economy and for the energy and food markets, since it significantly restricted supply and triggered a historic increase in these commodities prices.

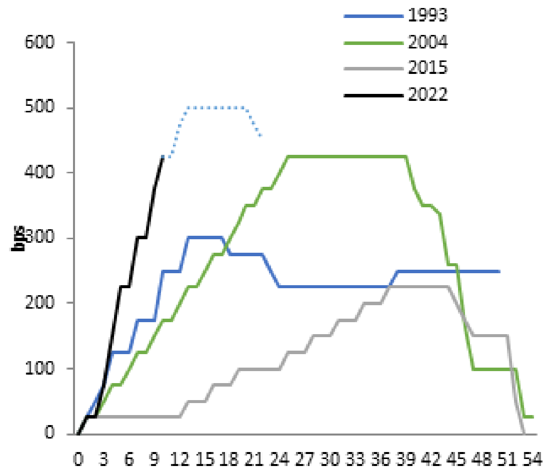
To hold back the highest inflation ever recorded, Western developed and emerging countries central banks undertook in 2022 the most aggressive monetary standardization process in recent years. When evaluating developed economies, the general interest rate hike has sped up in recent months (see **Graph II.1**). As for the specific case of the Fed, since March 2022 it has undertaken the most aggressive monetary standardization process in the last thirty years (see **Graph II.2**). Between March 2022 and December 2023, the Federal Open Market Committee increased the target range for federal funds rate by 450 basis points (bps).

Graph II.1: Monetary Policy Rates
January 2018 - December 2022



Source: Central Banks

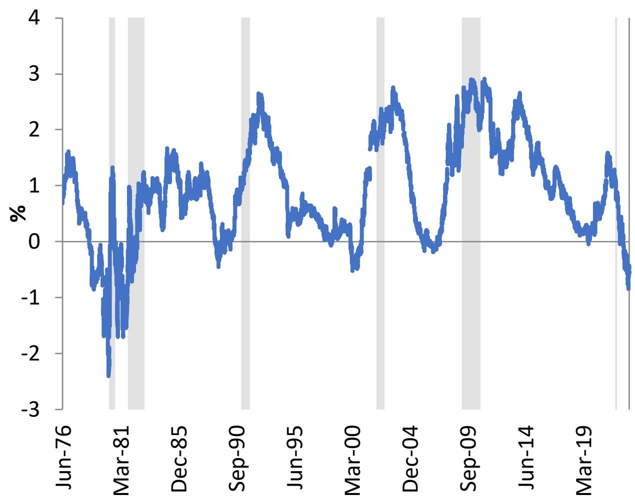
Graph II.2: FED Interest Rate Cycles
1990 - 2022



Source: SBP with Board of Governors of the Federal Reserve System data

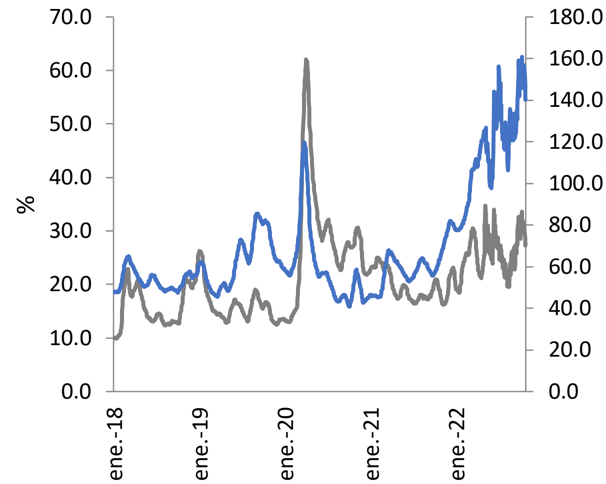
Interest rate hikes meant that, during 2022, the financial markets have experienced one of the most negative performances in history. There have even been marked devaluations simultaneously in the different fixed income and variable income segments; 2022 was also an atypical year, in which assets showed great movements. The only time that both shares and bonds moved in the same direction above this level was 1982. The S&P 500 lost 18% including reinvested dividends, while 10-year Treasury bonds performed equally poorly. It is the first time ever that both assets have suffered double-digit annual falls since 1872. With this, the VIX index (expected volatility for equities) remained at levels like the average for the first half of 2022. The volatility of yields on the United States (US) Treasury bonds (MOVE index) increased to levels like 2008, which led to tensions in the fixed income market. This environment has led the US bond markets to anticipate a moderate growth (flattening of the yield curves) or even the possibility of economic recession (see **Graphs II.3 and II.4**).

Graph II.3: Yield Curve
June 1976 - December 2022



Source: Federal Reserve Bank of St. Louis

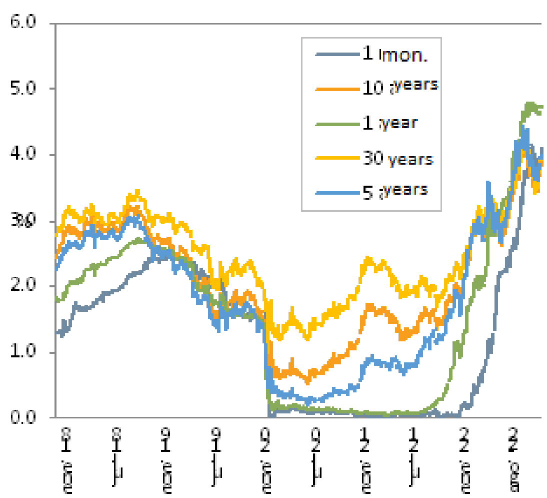
Graph II.4: Implied Volatility Index
January 2018 - December 2019



Source: Federal Reserve Bank of St. Louis

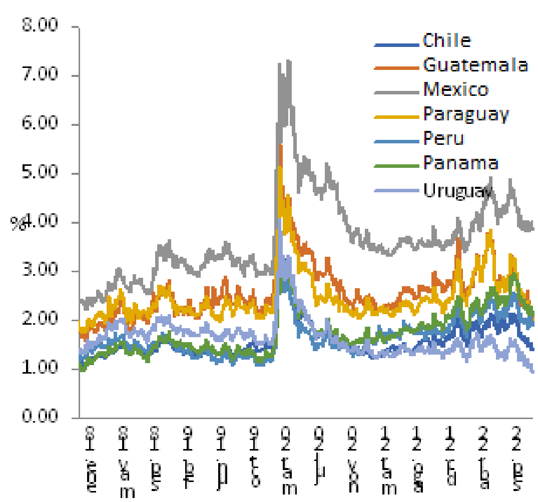
With increasing yields on the debt of these economies, financial markets in general show more adverse conditions, without disruptive events that compromise financial stability to date. In terms of US Treasury debt, the yield increase (which serve as the basis for pricing debt in US dollars in emerging economies) lasted until mid-November and was accompanied by an expected price increase volatility of these instruments (see **Graph II.5**). Financing cost has increased, also some stress episodes have put pressure on the markets. Sovereign interest rates have climbed across the board, both for emerging and developed economies, and EMBI-measured risk premiums have risen across the board (see **Graph II.6**).

Graph II.5: US Treasury Rates
January 2018 - December 2022



Source: Board of Governors of the Federal Reserve System

Graph II.6: EMBI - some LATAM countries
January 2018 - December 2022



Source: JP Morgan

2. Domestic economic activity

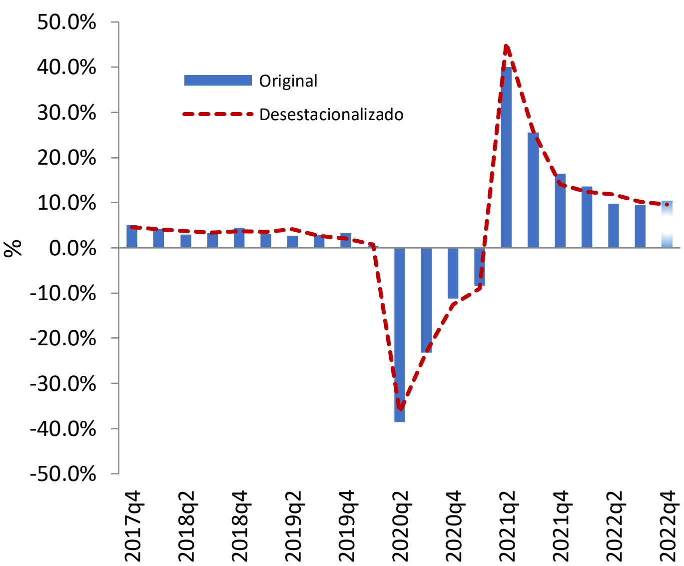
○ Aggregate and sectoral activity performance

At the end of 2022, economic activity continued to strengthen the reactivation and economic growth process that began in 2021 after the progressive normalization of social mobility. The improvement in economic activity was accompanied by the recovery in total employment but continued to present sectoral asymmetry.

According to the latest figures published by the National Institute of Statistics and Census (INEC, for its acronym in Spanish), the Panamanian economy maintained a solid growth rate in 2022 expanding 10.8%. With this result, this activity not only recovered its pre-pandemic levels but would also be 5.7% above the level reached in 2019 (see **Graph II.8**). This performance reflects the Panamanian economy's resilience to face the different shocks. It is worth noting that the base year was recently updated with reference to 2018, where GDP in nominal terms reached an amount of USD 76.53 billion, with a 13.5% growth rate compared to the previous year, which corresponds to a USD 9.12 billion year-on-year growth.

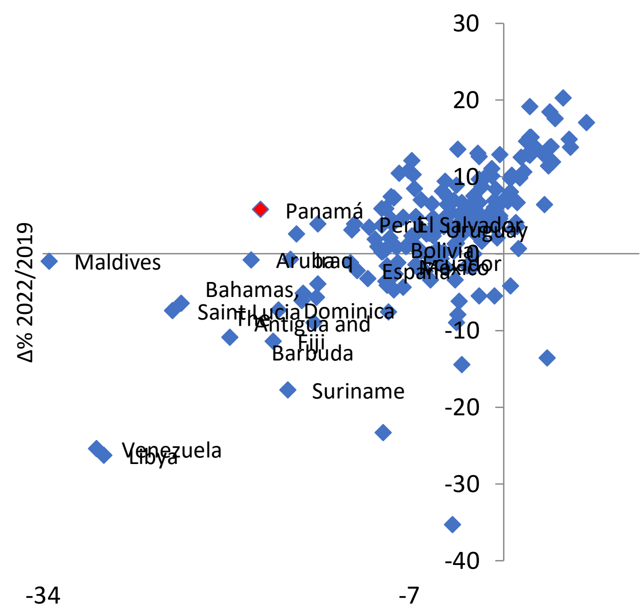
In Q4 2022, the estimated economic activity based on the available data continued to grow compared to the performance observed in the previous quarters of 2022 (see **Graph II.7**). With seasonally adjusted figures, in Q4 2022 GDP grew 2.7% compared to Q3 2022 (year-on-year increase of 10.4% with original series and 11.1% annualized growth with seasonally adjusted figures). This progress compares to 2.2%, 1.9%, and 2.5% increases, respectively, in the three previous quarters.

Graph II.7: GDP annual differences IVQ2017 - IVQ2022



Source: SBP with INEC data

Graph II.8: 2020 Δ% GDP vs 2022/2019 Δ% GDP Relation



Source: with WEO and INEC data

Although the post-pandemic recovery of productive sectors has been widely reported, great asymmetry persists regarding the level of activity of each of them. Commerce; construction; and transportation, storage and telecommunications sectors were among the most dynamic good and services-producing sectors recording a year-on-year growth of 22.4%, 21.7%, and 11.9%, respectively. The increase was 52% thanks to construction and commerce contributions, which are two of the activities that aid the most to the increase in national accounts but were deeply affected by the contingency measures in 2020.

However, to date there are still lags in the recovery of various services that are more sensitive to social distancing, such as recreational or accommodation services, given the restrictions and low demand they still face. Compared to 2019, hotels and restaurants are the most lagging services (-32.7%); followed by construction (-20.1%); [private] education (-10.8%); other service activities (-10.5%); and industries (-7.2%) (see **Graph II.2**).

Within the largest sectors that have not recovered yet, construction activity presented, in 2022, an 18.5% growth mainly based on public investment in infrastructure works, as well as the construction of residential complexes and civil engineering works, and specialized works. As for the sector, it recorded a 36.2% increase in its added value, mainly because of the performance of restaurants and the entry of more tourists and visitors to the country. It is worth noting that since late November, the operation of a cruise port began, which is expected to boost tourism and, therefore, tourism activity in 2023.

Table II.2: Sectoral GDP Performance
Base Year 2018 = 100

Activity	Growth (%)		2022 vs
	2021	2022	2019
Mining	104.5	6.3	179.6
Public administration and defense	7.8	4.0	24.8
Healthcare	1.8	5.9	17.2
Commerce	18.7	16.3	15.6
Public services	6.3	3.2	12.4
Primary activity	4.7	5.2	12.2
Transportation	16.9	13.7	12.2
Administrative activities	13.8	9.3	11.2
Professional activities	20.1	17.8	11.1
Information and communication	4.7	2.9	9.1
Financial and insurance activities	1.1	5.5	7.8
Real estate activities	6.4	12.9	3.6
Artistic activities	103.8	47.4	1.3
Manufacturing industries	11.4	5.1	7.2
Other service activities	5.3	11.8	10.5
Education	-0.3	-2.0	10.8
Construction	28.8	18.5	20.1
Hotels and restaurants	28.9	36.2	32.7
GDP	**15.8**	**10.8**	**5.7**

Source: INEC.

Appendix II.1 Financial vulnerability and GDP risk scenarios using Growth at Risk (GaR)

The Growth at Risk model is a tool used to assess the risk of a country's GDP deviating from its historical trend and, therefore, experiencing a decline that could lead to a recession. The financial literature uses the Value at risk (VaR) indicator as a measure to calculate extreme losses of an investment, given market conditions, over time. Thus, this measure serves as a guide for investors and regulators on how much to provision to cover potential losses. Similarly, this methodology has been adapted to calculate losses in GDP growth that Adrian et al. (2019) have called Growth at Risk (GaR).

The model is based on the idea that economic shocks, both internal and external, can affect the economic growth of a country and uses a risk analysis methodology to assess the probability of such shocks occurring. The model is based on the idea that economic shocks can be divided into two categories: idiosyncratic shocks, which are country specific; and common shocks, which affect several countries at the same time. The model uses several economic variables, such as the inflation rate, the interest rate, and the exchange rate, to measure a country's exposure to these shocks and assess the probability that they will occur in the future. In particular, the Panamanian case is interesting because it is an emerging, dollarized economy, with no central bank where the financial sector is mainly associated with bank intermediation and the capital market is incipient. Likewise, financial dollarization could generate differentiated impacts of financial shocks. On the other hand, being a small and open economy, Panama could be strongly affected by external financial shocks.

GaR estimation: The Panamanian case

The financial conditions could affect growth negatively, as it was observed during the global financial crisis. Therefore, lax financial conditions may support growth in the short-term, but they are also conducive to encouraging excessive risk taking, increasing financial system's vulnerabilities, which in turn could affect growth in the medium-term.

Financial conditions hold important information on the probability distribution of future growth outcomes. The conditional density forecast of future GDP growth in Panama is based on current financial and external conditions and it is estimated using quantile regressions following the IMF approach (2017). Quantile regressions show a regression of future GDP growth (y_{t+h}), on current growth (y_t), financial conditions, and external demand:

$$Q(y_{t+h}, q) = \beta_y^q y_t + \beta_p^q p_t + \beta_l^q l_t + \beta_{ff}^q ext\_fin_t + \beta_{fd}^q ext\_dem_t + \varepsilon_{t,h}$$

where q indicates the quantile level and h the forecast horizon (in quarters). The regression is fitted on a set of quantiles (0.10, 0.25, 0.50, 0.75, 0.90) for 4-, 8-, and 12-quarter forecast horizons to account for the impact of financial conditions on growth density forecasts at different horizons. The price of risk (p_t), leverage (l_t), external financial conditions (ext_fin_t), and external demand (ext_dem_t) estimated through the corresponding ICFs, which are evaluated separately in the quantile regressions to investigate the relationship between importance of each financial condition dimension in pinpointing risks to short- and medium-term growth prospects. The results of the quantile regressions suggest that different financial condition dimensions have divergent impacts on the growth forecast depending on the forecast horizon.

Application of the methodology for the creation of extreme scenarios

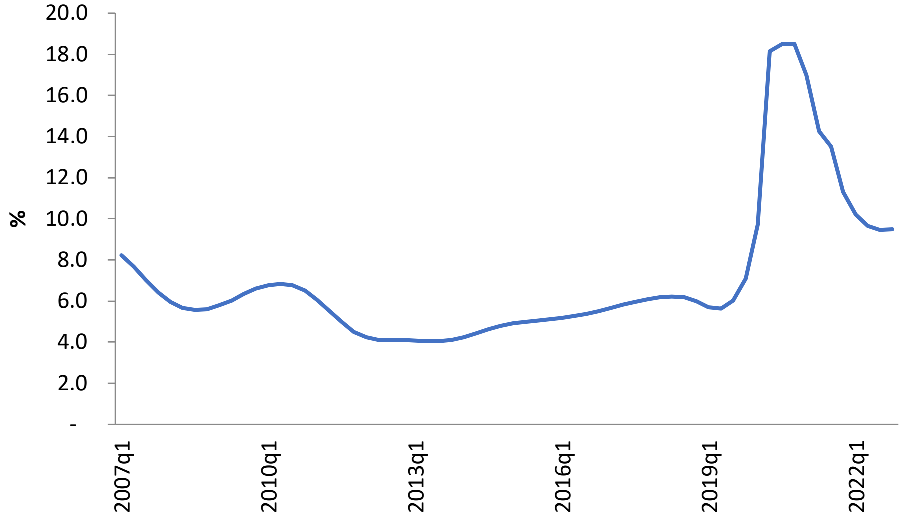
A necessary component of the stress-testing exercise is the design of a hypothetical extreme macroeconomic scenario. The GaR offers a framework where sensitivity exercises can be considered at different moments in time including paths for economic growth, whose average over the horizon of the sensitivity exercise is equivalent to a g_{t+1}, α estimated at each moment, with the same α confidence level.

It should be noted that GaR does not represent a forecast. Growth at risk is a tool that allows an analysis from two perspectives: first, to study the evolution of downside risks to growth given current financial conditions, and second, to analyze a possible trade-off between the financial conditions and the risks they imply for economic growth in the medium-term.

- **Employment market**

During the first half of 2022 (the latest official data available), unemployment continued to show signs of recovery and reached a 9.9% rate. With this result, unemployment decreased 1.4 points, i.e., it went from 11.3% in October 2021 to 9.9%, according to the last assessment (see **Graph II.9**). This would be the lowest unemployment rate since the onset of the health crisis in the country when the indicator rose to 18.5%. Looking at the performance of the first half, given the great momentum of the domestic economy, we believe that the return of many inactive [people] to the labor market would last, in such a way that employment rate could continue to show improvements. The recent performance of sectoral private employees makes it possible to distinguish between different advancements at the sectoral level but most still show a relevant lag. However, taking pre-pandemic levels into account, hotels and restaurants; financial; and construction sectors still have recovery potential, both in terms of activity and recruitment. Although, it is expected that economy will continue to recover the employment level and it will be possible to re-hire people who were laid-off; the evidence of the decrease in the employed people, and the difficulty of recovering the people who were dismissed because of the pandemic trigger red flags regarding the economy's ability to resume the employment rate recovery for the second half of the year and, therefore, continue to observe significant improvements in employment and unemployment rates. Going forward, the good performance of the labor market and consumer confidence will continue to be determining factors to boost the credit portfolio. However, to maintain its quality it will be essential to have prudent lending practices to contribute to a healthy growth of the portfolio.

Graph II.9: Unemployment rate (estimate)



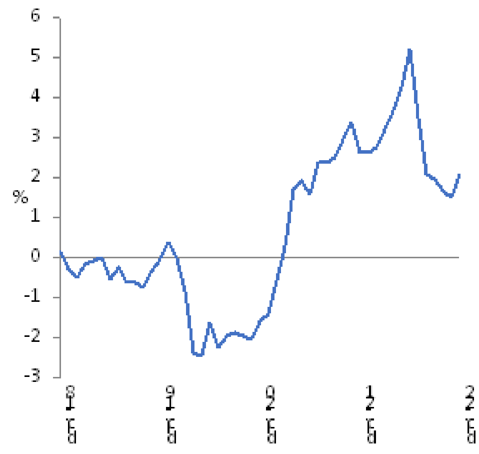
Source: SBP with INEC data

- ### Recent Inflationary Evolution

Annual headline inflation stood at 2.1% as of December 2022 (see **Graph II.10**), affected by the inflationary pressures derived from problems in the supply chains, which, although minor, persist, as did the Russia-Ukraine war. Having said that, it is possible to deduce that in the Panamanian case inflation is a typical example of cost inflation, i.e., initiated and motivated in its origin since commodities or goods and services prices increased considerably because of the reasons and causes already identified. It is worth remembering that we came from a tight commodity market with many frictions and multiple supply restrictions. In addition, the fact of the Russia-Ukraine war came to be a catalyst of these price movements, since there is a high degree of dependence on Russian and Ukrainian commodities (energy, grains, fertilizers, among others). In this context, the prices of many commodities have risen sharply, on net terms, and have fluctuated dramatically in response to geopolitical events.

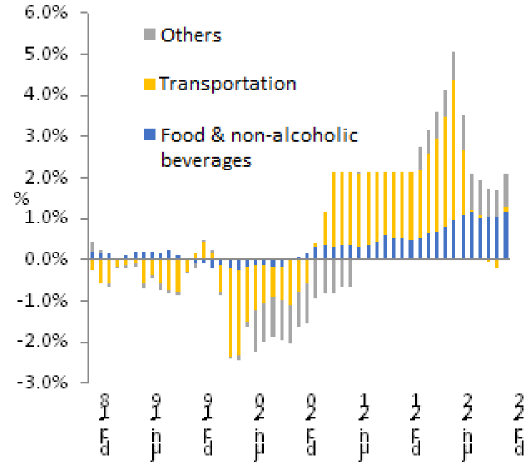
Although inflation has sped up significantly since late 2021, the food and non-alcoholic beverages item is the one that has contributed the most to the acceleration of aggregate prices. The moderation observed in the domestic market during the second half of 2022 is mainly because of the correction in fuel prices. It is possible to observe that fuel price hikes, within the transportation item, explained more than half of the increase experienced during the first half and its consequent decrease during the second half clarified its decline (see **Graph II.11**).

Graph II.10: Consumer Price Index
December 2018 - December 2022



Source: INEC

Graph II.11: CPI Δ% Incidence
Dec. 2018 - Dec, 2022

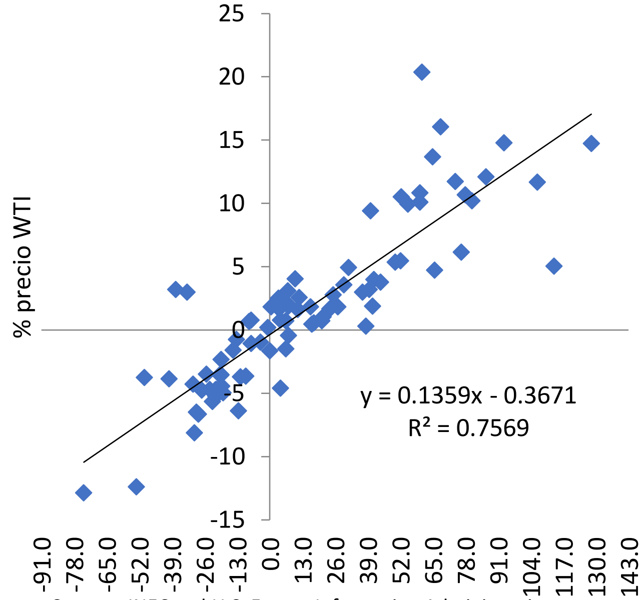


Source: With INEC data

Even though headline inflation reached its peak in June 2022, and since then it has decreased, it is relevant to point out that this decrease is mostly because of the volatile and even random element that corresponds to the non-core component (mainly food and fuel). Therefore, the inflation outlook for 2023 is challenging. We estimate that although inflation could remain around the historical average (2%), there are elements that could affect the performance of consumer prices, especially the core index, which faces risks due to: 1) the contamination of expectations and pricing processes, which can arise after a prolonged inflationary period; 2) salary pressures and second round effects; and 3) volatility episodes in the commodity market.

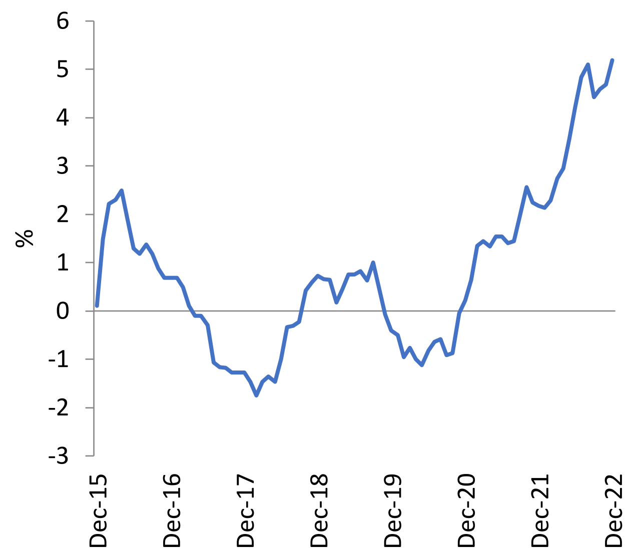
While there have been consecutive oil prices declines, several surges' scenarios occurred, either due to increases in market volatility or cuts in oil-producing countries. Oil price hikes have direct repercussions on the country's price levels (see **Graph II.12**). Regarding food and non-alcoholic beverages, it has contributed the most to the acceleration of aggregate prices during the second half. The data observed in December show that food prices have recorded an annual growth of approximately 5%, the highest data available of the current series (see **Graph II.13**). in fact, the international context has marked a sustained growth in nitrogenous fertilizers prices, one of its main supplies. Among the factors that explain this price escalation is the high international gas cost, the main raw material for its production. On the other hand, the challenging climatic conditions have indirectly affected the price of vegetables and produce that are raw materials for the different agri-food supply chains.

Graph II. 12: WTI and Transportation Inflation
December 2015 - December 2022



Source : INEC and U.S. Energy Information Administration

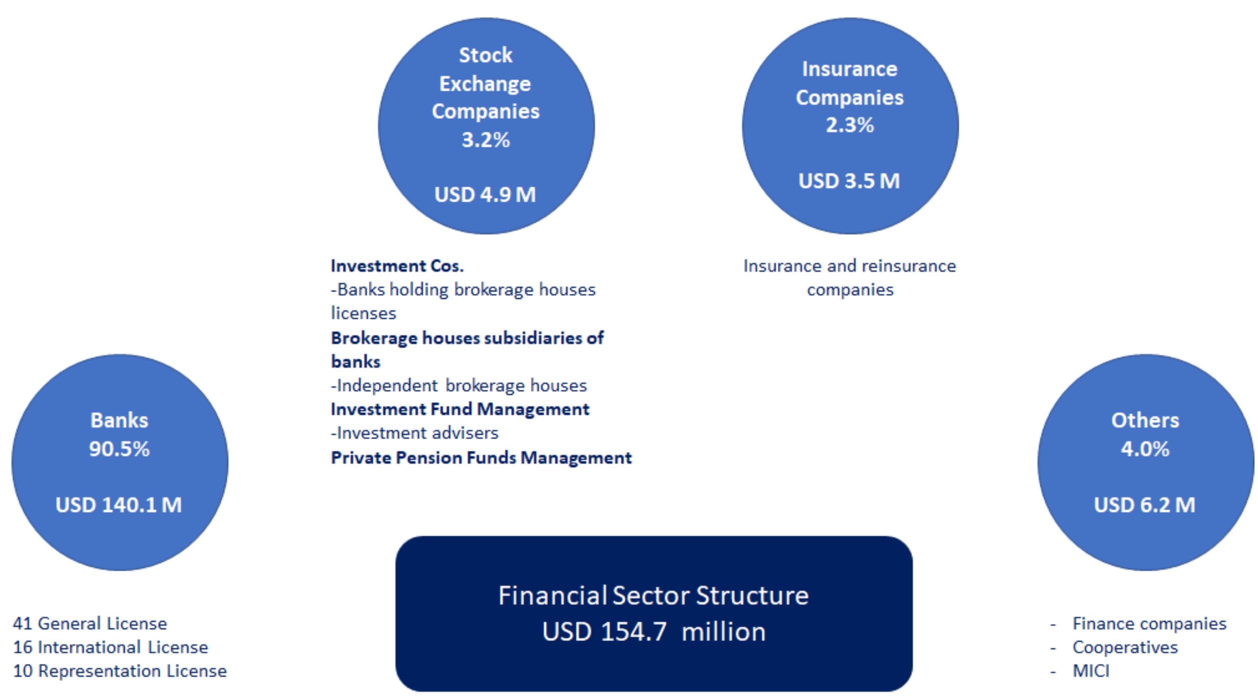
Graph II.13: CPI - Food & Beverages
December 2015 - December 2022



Source: INEC

III. Financial Sector Structure

Graph III.1: Financial sector structure



The Panamanian financial system is made up of banks, which represent 90.5% of the total assets of the financial sector; followed by securities companies, 3.2%, which are supervised by the Superintendency of the Securities Market; insurance companies, 2.3%, which are regulated by the Superintendency of Insurance and Reinsurance; and finally, although grouped together they represent 4.0%, their individual share is around 1% and they are: finance companies, cooperatives and pawnshops, and others.

Although legally, the Ministry of Economy and Finance (MEF) is responsible for overseeing the financial sector and has a close relationship with the different superintendencies, there is no legal framework to dictate consensual guidelines or policies based on technical macroprudential standards. However, there is a nexus under the Financial Coordination Council (CCF, for its acronym in Spanish) to exchange information and carry out joint projects. The CCF does not issue joint measures to mitigate systemic risk based on technical analyses.

To conduct these technical analyses, a great step was taken by forming the CCF's Macroprudential Policies Committee (CPM, for its acronym in Spanish), whose members were trained by experts from the IMF, the Central Bank of Germany, the Superintendency of Peru, and IDB.

IV. Macro financial Risk Matrix

Since the last installment of the Financial Stability Report (first half of 2022), the economic and financial recovery process continued to consolidate in Panama. The data as of the end of the first half of 2021 continue to show a system with stable financial fundamentals. The capital and liquidity buffers accumulated by financial system entities in recent years, because of the regulatory framework prudential requirements, have contributed to the financial system's resilience during the pandemic and have become important macroprudential policy tools. However, the risks associated with the evolution of the pandemic continue to appear as the most relevant for the financial system. Uncertainty persists regarding its effects on the credit portfolio of the most vulnerable sectors whose incomes have suffered the greatest impact, as well as the risk that the concentration in financing sources represents for some institutions.

On the other hand, in terms of risks there are some political actions that, although could seek to extend and introduce new measures to help debtors in this juncture, could put the financial system's stability at risk. Because of the foregoing, even though the financial system has been showing a significant degree of resilience, the SBP will continue monitoring and assessing this scenario along with the Financial Coordination Council and, if necessary, will use the available tools to promote financial stability local conditions.

The most relevant elements of the potential financial system's vulnerabilities are presented below.

Figure IV.1: Macroeconomic risk map

Economic risks

- Geo-political risks
- Monetary policy rate hikes
- Domestic socio-political risk
- Inflationary pressures

Economic Indicators/Projections

	2023	2024
GDP	4%	5%
Unemployment	9%	7%
Deficit	49%	47%
Real activity rate	9%	7%

SBN Aggregate Financial Risks

Credit Risk	Market Risk	Liquidity Risk	Climate Risk
Increase of arrears due to higher financial burden	Unrealized loss impact percentage	High volume of demand deposits	
Lower payment capacity of households	Maturity increment	Mismatches	
Slow recovery of the Construction and Tourism sectors			Phenomena affecting crops and impacting credits

However, there are some external risks that could compromise the quality of the bank's credit portfolio.

Given the potential risks derived from a situation marked by exogenous factors, such as geopolitical risks, the standardization of the monetary policy at the global level, the market volatility, and the inflationary performance, vulnerabilities could appear affecting the banks' portfolios, as is the case of the increase in the cost of funds, country risk premium, among other factors.

Another risk considered, no less important, is the reputational risk, which involves factors that can affect the image and confidence in our country and the economy. The non-delisting from the grey list and the actuarial deficit of the Social Security Fund & Administration (CSS, for its acronym in Spanish) are factors that could affect macroeconomic indicators which, in turn, can become vulnerabilities in the medium-term, impacting the cost of funds through higher risk premiums. We have identified these threats for some time, and we have been monitoring them within the set of financial soundness indicators.

In this context, the SBP will continue to analyze the effects of the international and domestic junctures on the market liquidity and solvency performances and will take the necessary measures to safeguard the International Banking Center (CBI, for its acronym in Spanish) stability. Similarly, it will be essential to take the necessary measures to safeguard the investment grade.

The tightening of global financial conditions has been faster and more aggressive than in previous interest rate hikes by the Fed. In fact, since March 2022, the Fed has launched the most aggressive monetary standardization process in the last thirty years. Between March 2022 and January 2023, the Federal Open Market Committee increased the target range for the federal funds by 450 basis points (bps). The fact that the FED did not abandon the "continuous hikes" language in its latest statement suggests that it plans to raise rates later in the year. The most recently published median projection for the late 2023 federal funds rate has been revised upwards, providing an outlook where additional adjustments may occur.

V. Macroprudential objectives and tools

The macroprudential policy is aimed at mitigating systemic risks and maintaining financial stability using macroprudential tools that are linked to macroprudential objectives.

The macroprudential objectives identified by the SBP are as follows:

- Mitigating and avoiding excessive credit growth and leverage.

Resources from depositors, who receive interest on the money deposited, are channeled through the banking system to debtors, who pay interests on the money received, thus stimulating economic development.

One of the causes of financial crises is the excessive credit growth, often accompanied by the relaxation of lending policies, the increase in financing liabilities, without proportionally increasing the bank's capital.

The macroprudential policy, through broad-based (e.g., buffers and leverage ratio) and sectoral tools (e.g., weighing on LTV, term, specific sectors), seeks to reduce excessive credit growth, maintain adequate leverage levels, and strengthen bank's solvency through capital buffers.

- Mitigating and avoiding excessive mismatches of maturities or market illiquidity

Banks take deposits (demand, term) and lend credits at different terms (including mortgages). Additionally, they obtain loans, issue debt, and acquire securities, all of which imply cash inflows and outflows.

If there is an excessive dependence on short-term funding, this may result in a lack of liquid assets at any given time, which can lead the bank to its assets to cover this liquidity need. These sales, under these circumstances, could be made at prices below the assets market value.

Due to the existing interconnection between financial institutions, these sudden liquidity needs can affect the entire banking system. The situation is deepened if the need for immediate liquidity occurs across the banking system.

Having macroprudential policy instruments in place that avoid excessive maturity misalignments or market illiquidity is intended to increase the banks' resistance to disturbances in liquidity and sources of market financing.

- Limiting direct and indirect risk concentration.

Depending on the business model, banks will be exposed to the different economic sectors. The macroprudential tools that limit both direct and indirect risk concentration are intended to avoid excessive exposure in each sector, which can result in a systemic event.

- Limiting systemic effect of inadequate incentives to reduce moral hazard.

The Basel Committee [on Banking Supervision] (hereinafter referred to as the Basel Committee) establishes a group of indicators and a methodology to identify systemically important banks.

The SBP, using the Basel Committee's criteria and considering the proportion of assets over Panama's GDP, has identified domestic systemically important banks (D-SIB). To achieve the objective of limiting the systemic effect of inadequate incentives to reduce moral hazard, it is recommended to implement measures to strengthen the resilience of identified systemically important banks. These measures include additional capital buffers for these institutions.

Monitoring and compliance of each identified objective is related to a series of tools, most of which have been implemented by the SBP.

Table V.1: Macroprudential objectives and tools

OBJECTIVE	TOOL	VULNERABILITY
1. Mitigating and avoiding excessive credit growth and leverage	Countercyclical buffer	Broad-based
	Conservation buffer (*)	
	Leverage ratio	
	Risk weighting for mortgage or mortgage-backed loans based on the LTV ratio	Household
	Risk weighting for personal car loans based on original terms	
	Loan-to-Income (LTI) Ratio (*)	
	Collateral valuation cutoff	
	Risk weighting for sector-specific corporate loans (*)	Corporate
	Collateral valuation cutoff	
2. Mitigating and avoiding excessive mismatches of maturities or market illiquidity	Liquidity coverage ratio (LCR)	Liquidity
	Net stable funding ratio (NSFR) (*)	
	Loan-to-Deposit Ratio (LTD)	
3. Limiting direct and indirect risk concentration	Limit to large exposures	Structural
4. Limiting systemic effect of inadequate incentives to reduce moral hazard	Systemic buffer (*)	

(*) Have not been implemented yet.

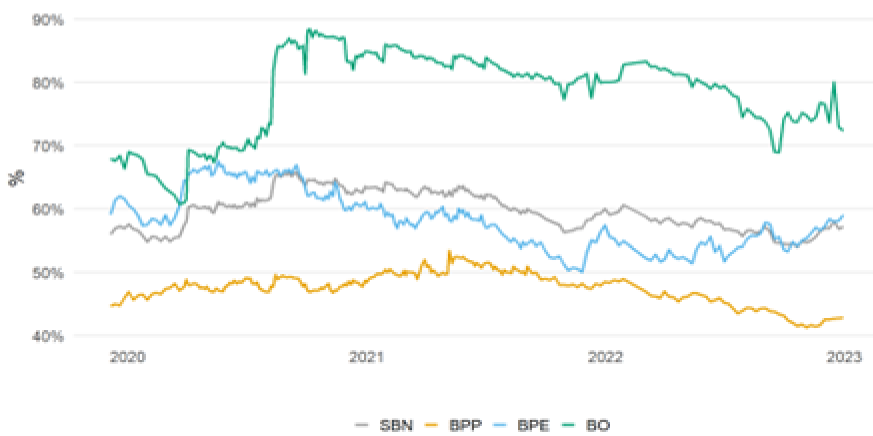
VI. Bank Operations

A. Liquidity

At of the end of 2022, the Banking System liquidity reached 57.18%, which exceeds the regulatory minimums. Currently, domestic banks are in a well-heeled position with respect to regulatory requirements, which would allow them to face market volatility. Banking system banks have historically had robust liquidity buffers and constant access to structural and wholesale deposits, which are a fundamental part of their funding.

Regarding liquidity to date, although there has been a certain decline in ratios versus the levels reached in 2021, the financial system maintains adequate liquidity ratios at the aggregate level, with sufficient resources to meet its short-term needs and which, in turn, will allow the financial system to continue with credit growth. With respect to forecasts expressed in previous reports, it was expected that to the extent that the economic performance will be recovered, and therefore the credit portfolio will be energized, bank liquidity will be reduced but to levels that are still considered healthy compared to environmental risks. The decreases recorded are to a large extent the reflection of greater lending.

Graph VI.1: Weekly Average Liquidity Ratio
December 2019 – 2023



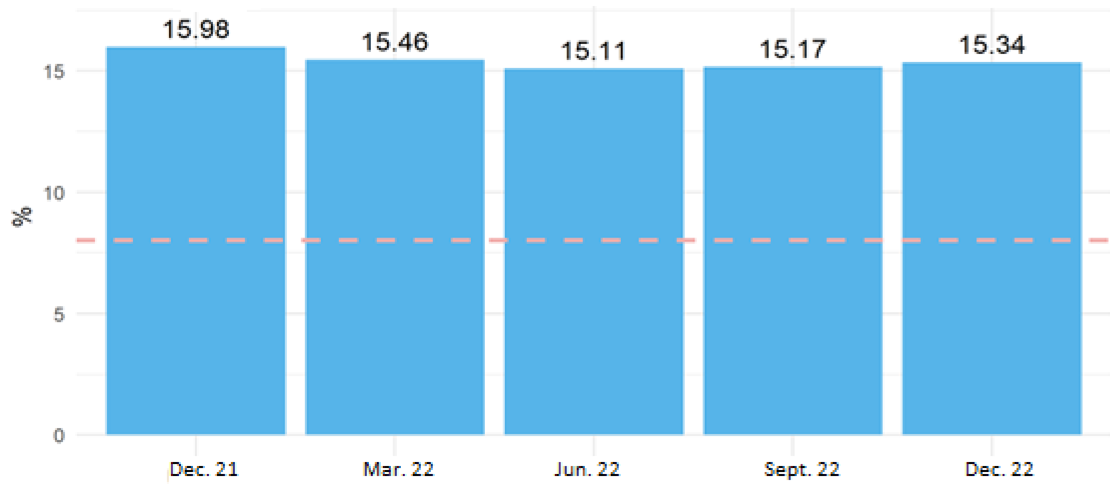
Source: General License banks

B. Solvency

In 2022, the Capital Adequacy Ratio (CAR) shows that the International Banking Center’s aggregate solvency levels remained in a well-heeled position. The capital adequacy ratio on risk-weighted assets (RWA) was 15.34%, exceeding the regulatory minimum of 8%. The capital compliance of the group of banks did not record significant changes versus the previous quarter.

The decrease that has been recorded in recent years was because of the increase in RWAs, driven by the performance of the credit to the private sector and the decline in capital funds. This reduction in capital funds responds to the use of the dynamic provision that is allowed as of the enactment of Circular No. SBP-DR-0124-2020 dated 15 April 2020, and previously established in Article 5 of Rule No. 2-2020 dated 16 March 2020. Currently, all banks running operations satisfactorily comply with the new bank capital regulatory standards.

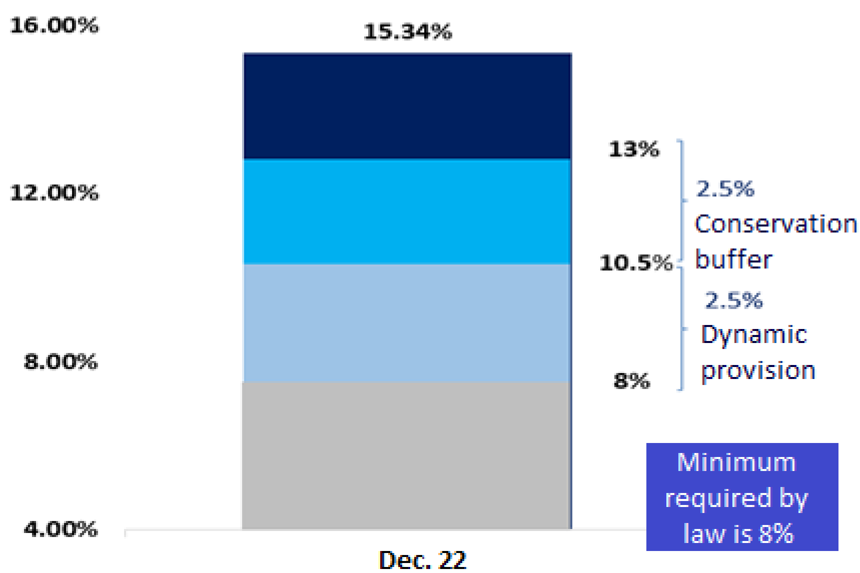
Graph VI.2: Capital Adequacy Ratio
December 2021 – December 2022



Source: General and International License banks

Graph VI.3 shows a year where if we apply the macroprudential regulation required by Basel for the adoption of the conservation capital buffer, **whose *main objective is to ensure that banks have an additional capital layer that can be reduced when losses are incurred***, which came into full effect in 2019, is set at 2.5% of RWA.

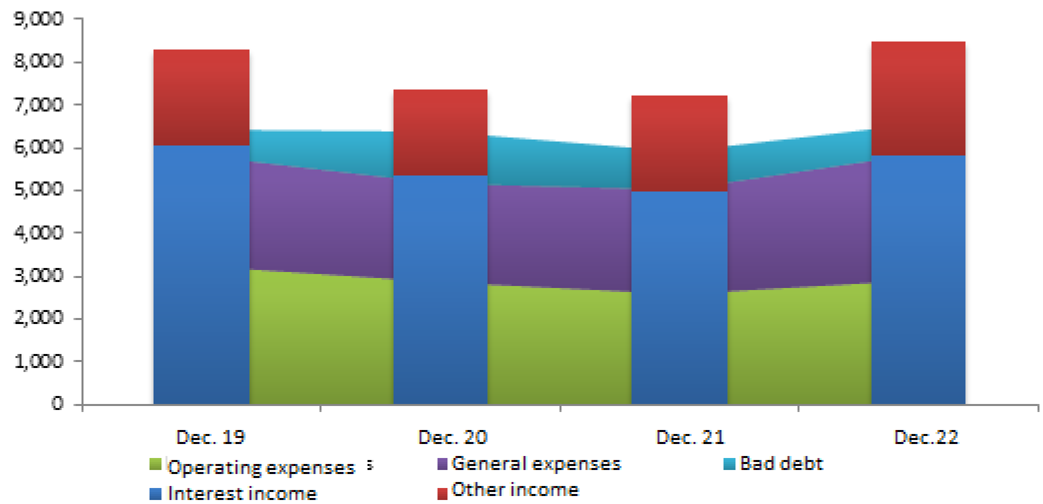
Graph VI.3: Credit Stress Result – Capital Adequacy



C. Income Statement

Last year closed with a very positive profit level if compared to 2021, but like that of 2019. It Will be very important for banks to be able to place greater volumes of productive assets to achieve sustainable profitability indicators.

Graph VI.4: Income Statement – Composition of the International Banking Center's Income and Expenditure (In millions of USD)
December 2019 – 2022



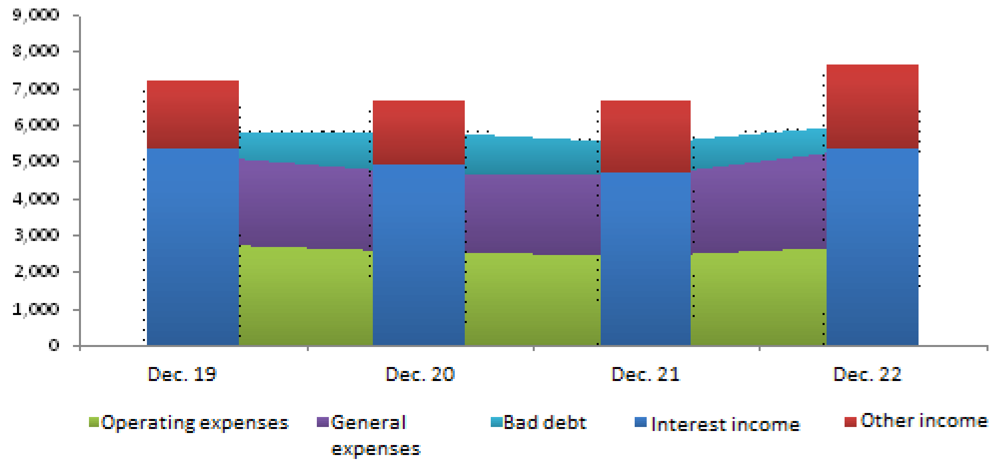
During 2022, an increase in general expenditure is observed because of activities such as software and technology acquisitions, which were essential to manage a large part of the portfolio subject to financial relief measures.

Regarding bad debt, they reached levels like 2019, after significant increases occurred in 2020 and 2021, because of higher risk credit operations, as well as several domestic banks penalized considerable amounts, as a measure of sanitation.

General expenses amounted to USD 2.95 billion, a year-on-year growth of 21.6%. This increase responds, in part, to digitalization initiatives.

It is important to point out that that both the International Banking Center and the National Banking System maintain a performance fairly like the income and expenditure composition.

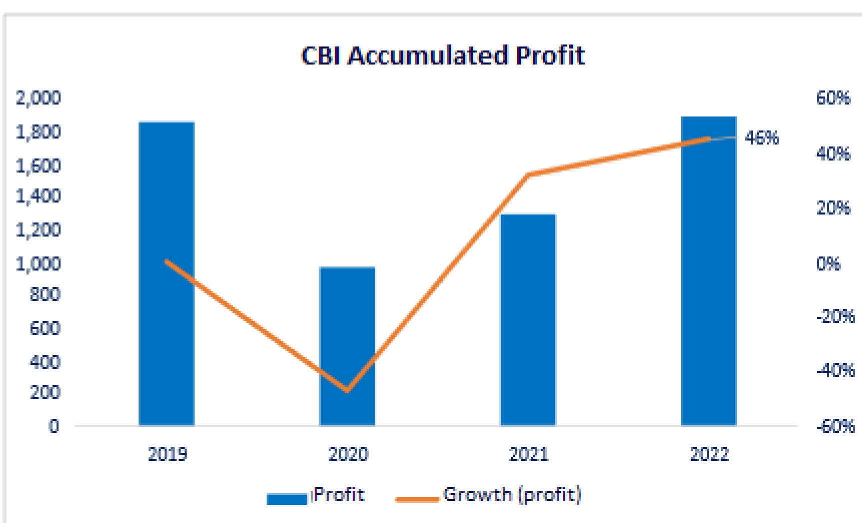
Graph VI.5: Income Statement – Composition of the National Banking System's Income and Expenditure
(In millions of USD)
December 2019 – 2022



Banks are well positioned to absorb short-term costs associated with greater investment in financial technology, which would lead to greater efficiency, reduce cyber risks, and new products and services.

It is expected that by 2023, banks will continue to invest resources for this purpose, mainly in strengthening the platforms and technological means of financial entities and payment for specialized support and cybersecurity services.

Graph VI.6: CBI accumulated income
(In millions of USD)
December 2019 – 2022



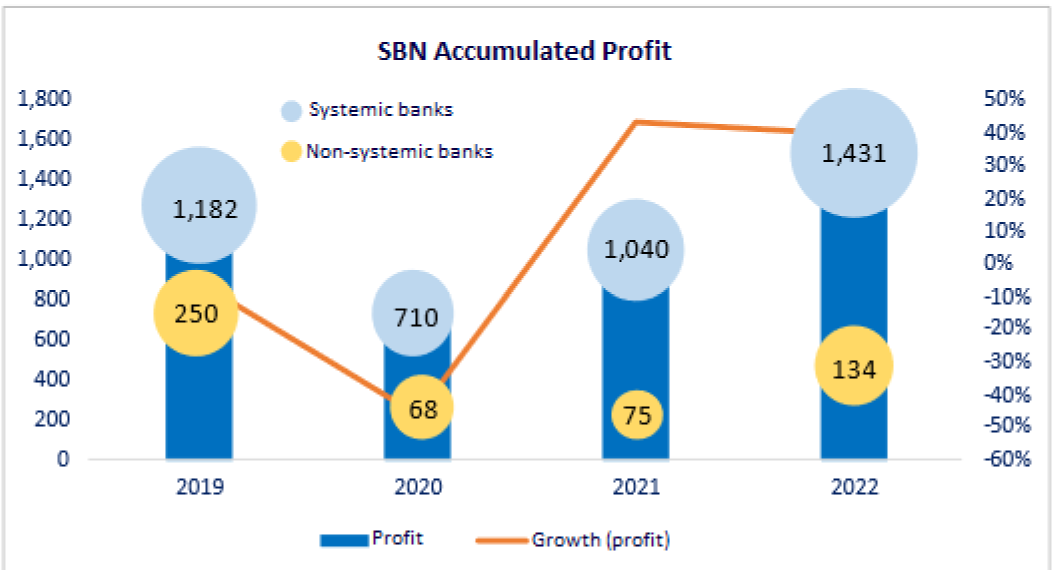
CBI and SBN profits have reached pre-pandemic levels where, at the end of 2022, the profit level amounted to USD 1.91 billion, a 45% growth. Within the SBN, D-SIBs contribute approximately 90% of the profits generated.

Lending operations produced significant results, growing 16.9%, while interest paid increased by 12.9%.

This result was mainly driven by the positive evolution of the financial margin and commissions derived from credit portfolio growth, the extraordinary income from a banking group, the robust asset quality management, and expenditure control, as well as less provisioning. With this outcome, banks net profitability would be at levels close to the pre-pandemic period.

In addition to receiving profits from abroad, provided by an International License bank, it is noteworthy that assets profitability continues with a positive performance.

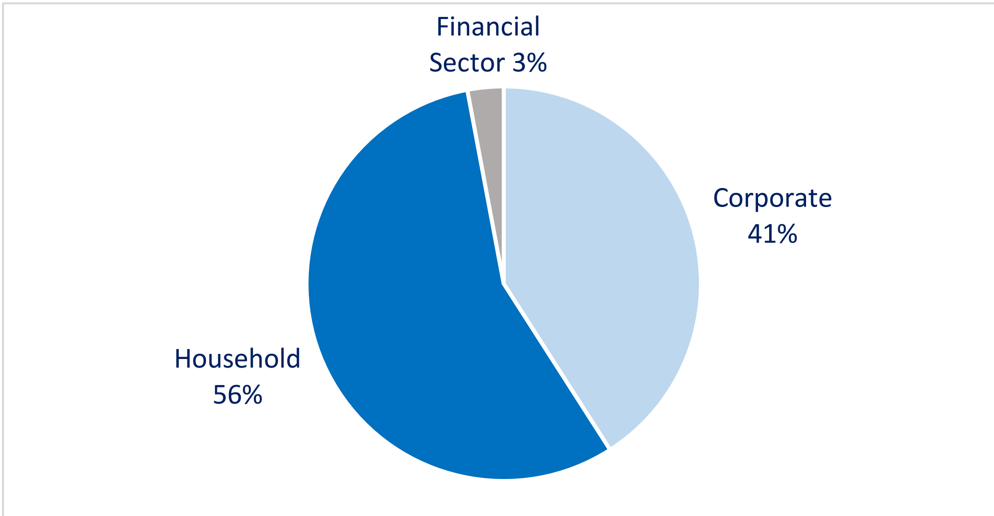
Graph VI.7: SBN Accumulated income
(In millions of USD)
December 2019 – 2022



The National Banking System recorded accumulated net profits, as of December 2022, of USD 1.57 billion, 30.3% more than that of 2021. Like what happened in the CBI, greater credit activity and lower provisioning had positively impacted the sector's profits.

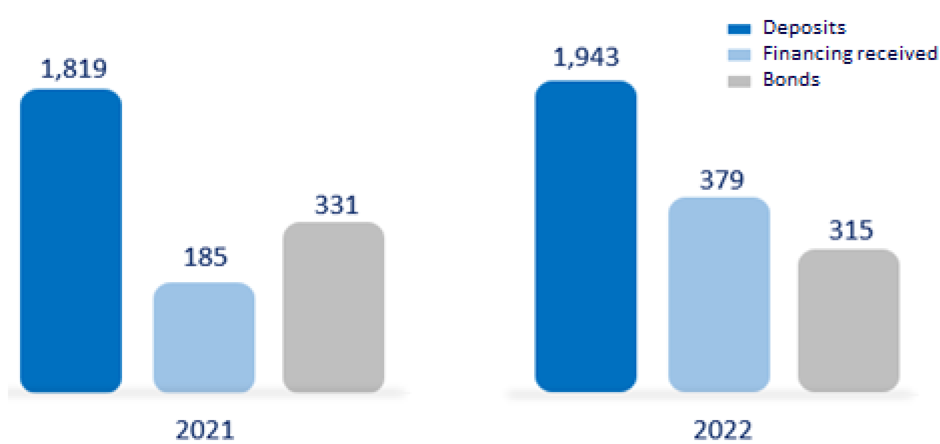
In nominal terms, both the CBI and the SBN recorded financial indicators slightly higher than those before the pandemic. It is expected that SBN banks will continue with cost control and operational efficiency strategies. Currently, CBI efficiency levels are at 53%.

Graph VI.8: Yield Distribution as of December 2022 – Income by activity
December 2022



The composition of 2022 returns are related to the portfolio structure, 56% corresponds to the household portfolio and 41% to corporations.

Graph VI.9: Interest paid by funding
(In millions of USD)
December 2021 – December 2022



A component that increased within total revenues were loan commissions that grew 14% as of the end of the year.

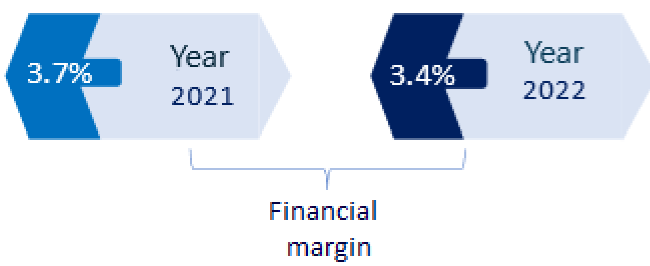
The SBN’s funding cost raised by 13%, because of increases in interest paid on deposits and in wholesale financing received by banks.

Table VI.1: Household Rate of Return
December 2022

	Interest	Rate of Return
Households		
Mortgage	895	4.5%
Personal loan	717	7.8%
Car loan	129	7.3%
[Credit] card	302	14.1%
Corporate	2,368	9.0%

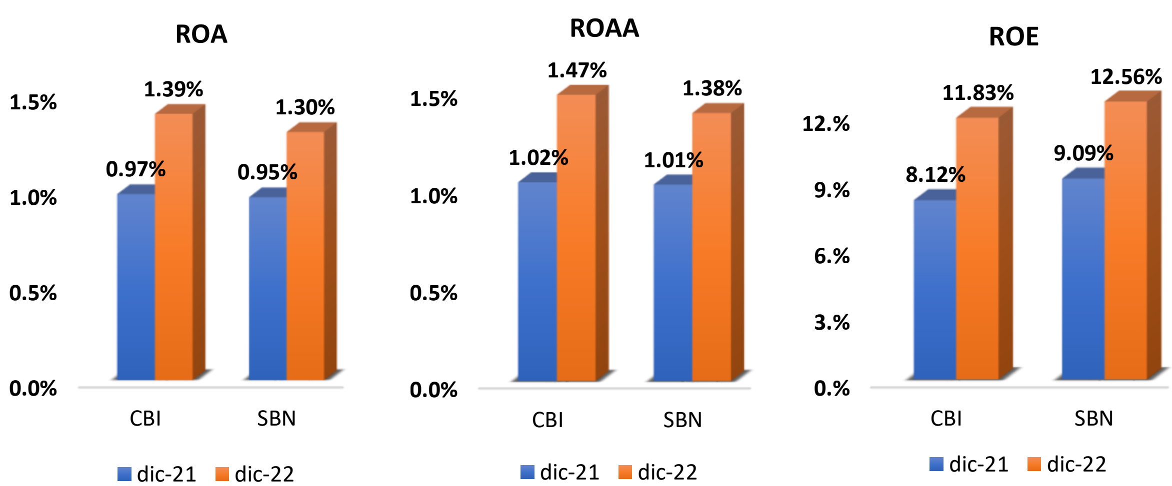
Taking a closer look at rates of return, mortgages, made for significantly longer terms than other home loans, returned 4.5%. Personal and car loans yielded between 7% and 8%. Credit cards interest produced a 14.1% return.

Graph VI.10: Financial Margin
December 2021 – December 2022



Effective resource management maintains a positive level in terms of financial margin.

Graph VI.11: Profitability Indicators
December 2021 – December 2022



As of the end of December 2022, the CBI and SBN showcased positive profitability indicators higher than those recorded in previous months. Thus, the Center's total results reached 1.39% (ROA), 1.47% (income-generating assets), and 11.83% (ROE). While the National Banking System obtained 1.30% (ROA), 1.38% (income-generating assets), and 12.56% (ROE). This increase occurred in a context of improvements in the placement of credits, the greater positive contribution of extraordinary outcomes, and the decrease in provisions for asset impairment.

Although this result is positive, it is asymmetrical among credit entities, and challenges are yet to be faced among which are to finish recognizing the impairment of modified loans, maintaining the capitalization of profits to continue having capital strength, and continue with the process of phasing out temporary regulatory flexibilities.

It should be noted that the improvement in profitability indicators took place even though in 2022 the average annual financial margin between lending and deposit operations fell by 0.32 percentage points. The foregoing would account for increases in terms of term deposit rates, without, on the contrary, there being significant increases in the lending part, with which the credit spread has been reduced.

D. Balance Sheet

The International Banking Center total assets reached USD 140.03 billion, a USD 6.68 billion increase versus December 2021, i.e., a year-on-year increase of 5.0%. Bank assets accelerated their expansion rate because of higher growth in the net credit portfolio (11.9%) and the securities component (5.4%). As mentioned in previous reports, on the liquid assets side, although it shows a lower performance (-17.8%), this is the reflection, in contrast, of an increase in productive assets. Currently, the banks' liquidity position is stable and has strengthened with the growth of deposits over the last year, which displays adequate liquidity in the current juncture.

It is worth noting that CBI assets are made up, mainly, of the credit portfolio that reported a balance of USD 83.35 billion, according to the financial statements provided by banks to the SBP. Regarding the performance of the net credit portfolio's external component, it increased by 24.9%.

Observing bank financing sources, deposits still are the highest percentage of CBI's funding as it finances its credit operations, which results in a low dependence of wholesale funding through market debt issuances that is usually more volatile. It should be noted that banks' funding strategy consists of financing their activities through term deposits, demand deposits (savings and current accounts), and later through bond issuance. CBI deposits, as of December 2022, totaled USD 98.38 billion, a USD 1.67 billion or 1.4% increase.

Obligations exhibited an increase of 27.7% and other liabilities grew by 9.9% compared to December 2021. As for obligations, it should be noted that these instruments also include the financing component via issuances. Although there are upsurges in the cost of borrowing, current market conditions could generate an appetite for this type of strategies to mitigate future liquidity risks, to reduce the uncertainty of even higher rates that could compromise new investment decisions, and to take advantage of the flattening of the curve between the short- and medium-term rates.

Table VI.2: International Banking Center – Balance Sheet
(In millions of USD)
December 2021 – December 2022

Breakdown	2021	2022	Dec. 22 /Dec. 21 Difference	
	December	December	Total	%
Liquid assets	24,209.8	19,900.9	-4,308.9	-17.8%
Net credit portfolio	74,454.8	83,341.2	8,886.4	11.9%
Domestic	*52,876.7*	*56,395.4*	*3,518.6*	*6.7%*
External	*21,578.1*	*26,945.9*	*5,367.8*	*24.9%*
Securities	27,763.0	29,255.5	1,492.5	5.4%
Other Assets	6,922.7	7,526.9	604.2	8.7%
Total Assets	**133,350.4**	**140,024.5**	**6,674.1**	**5.0%**
Deposits	97,014.9	98,379.6	1,364.8	1.4%
Domestic	*63,014.8*	*62,635.1*	*-379.7*	*-0.6%*
External	*34,000.1*	*35,744.5*	*1,744.4*	*5.1%*
Obligations	16,843.3	21,507.0	4,663.8	27.7%
Other liabilities	3,568.8	3,922.2	353.4	9.9%
Capital	15,923.4	16,215.6	292.2	1.8%

Source: General and International License Banks.

The National Banking System (general license banks only) total assets amounted to USD 123.93 billion, a USD 6.42 billion or 5.5% growth compared to 2021. The SBN net credit portfolio showcased an increase of USD 7.81 billion (11.4%) to reach USD 76.03 billion. Net external loans grew by 27.6%, while the net domestic portfolio had a performance of 6.3%. On the other hand, deposits taken by the SBN totaled USD 86.30 billion, a 1.1% increase, which is mainly the result of customer deposits.

Table VI.3: National Banking System – Balance Sheet
(In millions of USD)
December 2021 – December 2022

Breakdown	2021	2022	Dec. 22 /Dec. 21 Difference	
	December	December	Total	%
Liquid assets	19,868.3	16,234.5	-3,633.8	-18.3%
Net credit portfolio	68,224.8	76,027.0	7,802.2	11.4%
Domestic	*55,126.1*	*58,586.1*	*3,460.0*	*6.3%*
External	*15,544.5*	*19,842.2*	*4,297.7*	*27.6%*
Securities	22,779.4	24,499.3	1,719.9	7.6%
Other Assets	6,641.4	7,166.1	524.7	7.9%
Total Assets	**117,513.9**	**123,926.9**	**6,413.0**	**5.5%**
Deposits	85,363.5	86,291.5	928.0	1.1%
Domestic	*62,928.4*	*62,423.4*	*-505.0*	*-0.8%*
External	*22,435.1*	*23,868.2*	*1,433.0*	*6.4%*
Obligations	16,547.1	21,189.9	4,642.8	28.1%
Other liabilities	3,346.1	3,792.2	446.1	13.3%
Capital	12,257.2	12,653.2	396.0	3.2%

Source: General License Banks.

E. Loans

As of December 2022, the SBN recorded growth in the gross domestic credit portfolio that reached USD 58.59 billion, a 6.3% increase when compared to 2021, which is an equivalent to a USD 3.46 billion increase in one year.

The recovery of credits to the private sector has been supported by the greater flow of financing to corporate loans, which, in turn, can be explained by a sustained growth of bank loans to the different segment components. The only component that underperformed was the construction portfolio (-4.3%). As regards to the balance of household loans, the housing portfolio (6.9%) and the consumer portfolio continued to show increases (1.4%). Consumer loans growth has been supported by higher-than-expected boost both in real wages and formal employment, as well as in the economy's own private consumption.

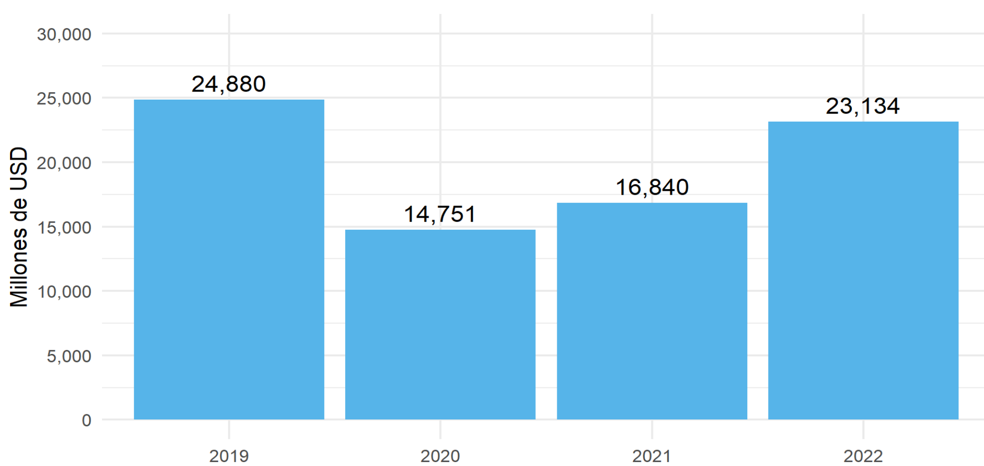
Table VI.4: National Banking System
Balance of Domestic Credit Portfolio by Economic Sectors
(In millions of USD)
December 2021 – December 2022

Sector	December 2021	December 2022	Dec. 2022/Dec. 2021 Difference	
			Total	%
TOTAL	55,126.1	58,586.1	3,460.0	6.3%
Public sector	1,476.2	1,492.2	16.0	1.1%
Private sector	53,650.0	57,093.9	3,443.9	6.4%
Financial & insurance activity	1,116.5	1,982.4	865.8	77.5%
Agriculture	431.1	488.3	57.2	13.3%
Livestock	1,356.6	1,409.6	52.9	3.9%
Fishing	87.0	121.7	34.7	39.9%
Mining & quarrying	50.8	46.5	-4.3	-8.5%
Commerce	10,822.5	11,671.6	849.1	7.8%
Industry	2,834.7	3,427.5	592.8	20.9%
Mortgages	18,749.1	19,797.2	1,048.1	5.6%
Construction	5,309.1	5,079.9	-229.2	-4.3%
Personal consumption	12,892.4	13,069.3	176.9	1.4%

Source: General License Banks.

Regarding to new loan applications and granting during the year, they remained positive. As of the end of December 2022, they reached an accumulated amount of USD 23.14 billion, a 32% growth compared to 2021. Although there was a significant acceleration in the second half of the year, the accumulated amount of these loans was below 2019 figures.

Graph VI.12: New Loans
December 2021 – December 2022



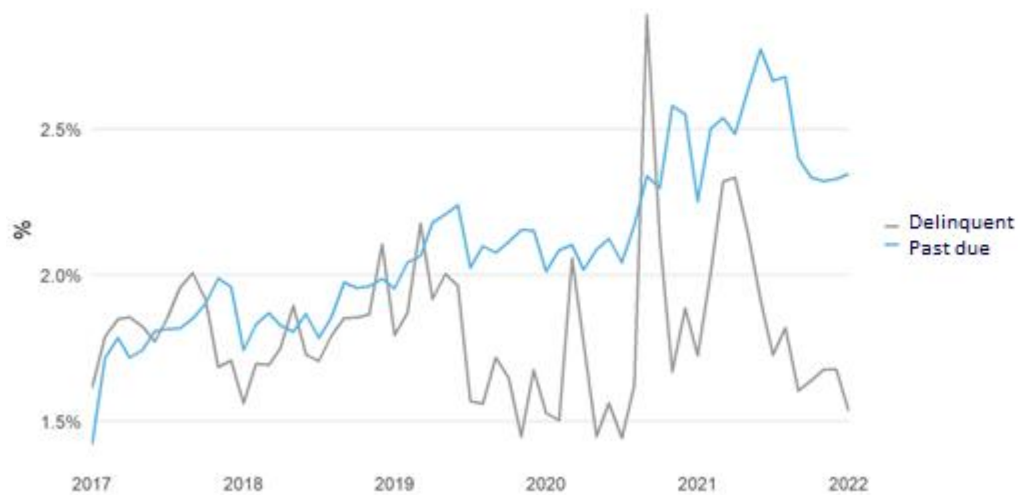
Fuente: Bancos de licencia general e internacional.

F. Portfolio Quality

The quality of bank assets has remained stable in recent months. Although the quality of the banks' assets was put under pressure because of the COVID-19 pandemic, the regulatory measures implemented, and the close overseeing of the most exposed sectors made it possible to control asset impairment. The amount of loans considered to be higher risk has decreased in recent months, especially doubtful loans, because of the write-offs made. As of December 2022, the CBI shows a delinquency ratio of 3.9%, of which 1.5% represents loans with arrears of 30+ days and 2.4% for loans with over 90+ days past due.

As regards reserve coverage for delinquent or past due loans, it was strengthened during the pandemic, increasing the banks' capacity to absorb losses due to future loan impairment. Therefore, it is expected that during 2023 the asset quality will continue to be controlled, even if the economic conditions are moderately weaker. Provision coverage for impaired loans is of 123%. However, given the environment of interest rate hikes and other external risks, some deterioration in the portfolio quality is foreseeable in 2023, due to a less favorable operational and consumer loans maturity context.

Graph VI.13: Portfolio Quality – Delinquent and Past Due
December 2017 – December 2022



Source: General and international license banks

G. Deposits

CBI bank deposits for December 2022 recorded a total of USD 98.38 billion, a USD 1.37 billion (+1.4%) increase compared to December 2021 (see **Table V.5**). Domestic deposits recorded a decrease during the surveyed period of USD 379.7 million, which represents a 0.6% decline versus December 2021. It is worth noting that the balance of traditional bank deposits, which are demand deposits, i.e., savings deposits that can be withdrawn at any time, and term deposits have been slowing down, which could be explained partially by the need to increase household current spending and business requirements.

On the other hand, external deposits recorded an increase of USD 1.75 billion, totaling USD 35.75 billion, a 5.1% increase, where Colombia remains the largest CBI user, with a 21% share of foreign deposits.

Table VI.5: International Banking Center – Total Deposits
(In millions of USD)
December 2021 – December 2022

Accounts	2021	2022	Dec. 2022 / Dec. 2021 Difference	
	December	December	Total	%
Deposits	97,014.9	98,379.6	1,364.8	1.4%
Domestic	63,014.8	62,635.1	-379.7	-0.6%
Government	11,612.6	12,099.6	487.0	4.2%
Customer	47,988.9	46,912.5	-1,076.3	-2.2%
Banks	3,413.3	3,622.9	209.6	6.1%
External	34,000.1	35,744.5	1,744.4	5.1%
Government	349.9	244.8	-105.1	-30.0%
Customer	26,241.0	28,054.8	1,813.8	6.9%
Banks	7,409.2	7,444.9	35.8	0.5%

Source: General and International License banks.

In the case of SBN banks, a trend like that of the CBI is presented, recording total deposits of USD 86.30 billion, a 1.1% increase versus December 2021, driven by external deposits, since domestic deposits have been showing an underperformance (see **Table VI.6**).

Table VI.6: National Banking System – Total Deposits
(In millions of USD)
December 2021 – December 2022

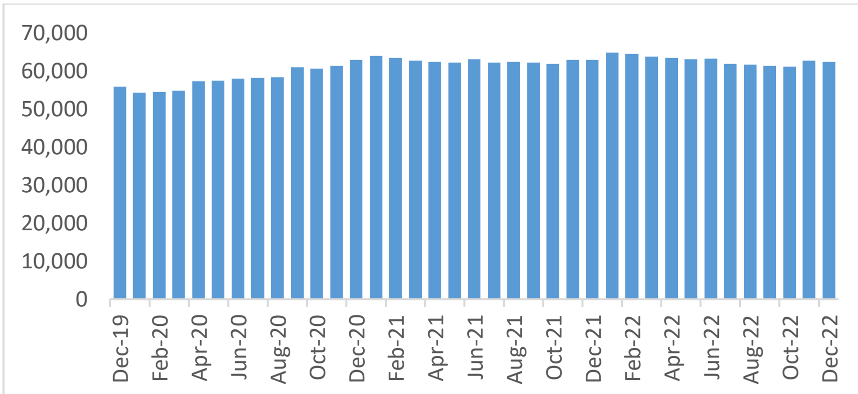
Accounts	2021	2022	Dec. 2022 / Dec. 2021 Difference	
	December	December	Total	%
Deposits	85,363.50	86,291.50	928	1.10%
Domestic	62,928.40	62,423.40	-505	-0.80%
Government	11,612.60	12,099.60	487	4.20%
Customer	47,988.90	46,912.50	-1,076.40	-2.20%
Banks	3,326.90	3,411.30	84.4	2.50%
External	22,435.10	23,868.20	1,433.00	6.40%
Government	347.8	181	-166.8	-48.00%
Customer	15,143.70	16,721.50	1,577.80	10.40%
Banks	6,943.60	6,965.70	22	0.30%

Source: General License banks.

It should be noted that domestic deposits represent 64% of total deposits. Of these, 75% are customer deposits, of which almost 60% are corporate deposits; and 50% are term deposits.

Although domestic deposits fell short, they maintain levels above those of pre-pandemic. **Graph VI.14** shows the evolution of domestic deposits.

Graph VI.14: Total Domestic Deposits
(In millions of USD)
December 2019 – December 2022

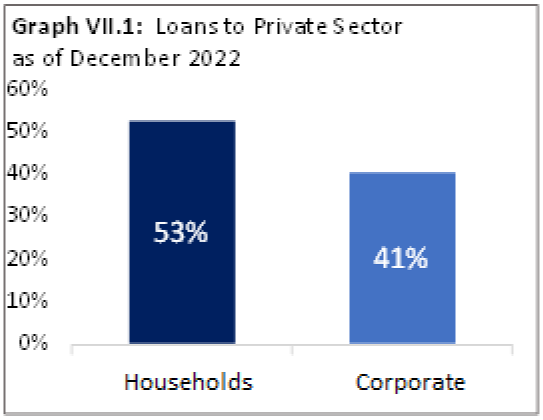


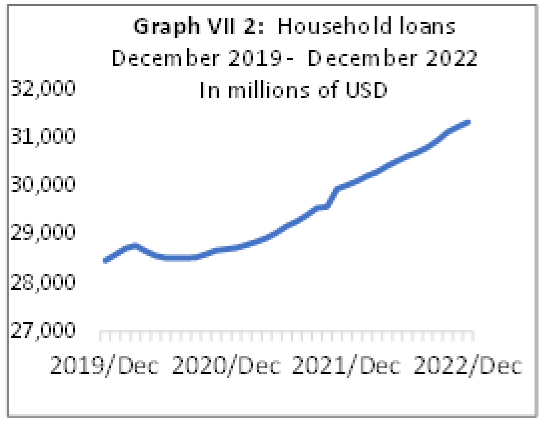
Regarding the structure of customer liabilities by maturity, term deposits continue to be the most important savings instruments. As of December 2022, domestic customer term deposits totaled USD 23.76 billion, followed by savings amounting to USD 13.92 billion, and demand deposits totaling USD 9.25 billion.

VII. Household Debt

Household debt (defined as total housing and consumer loans granted by bank credit establishments) in Panama represents an important share of the bank's credit portfolio. As of December 2022, housing and consumer placements reached 53% of loans to the private sector (see **Graph VII.1**).

In nominal terms, household bank debt amounted to USD 31.34 billion in December 2022 and is made up of 41.7% consumer loans and the remaining 58.3% housing loans.



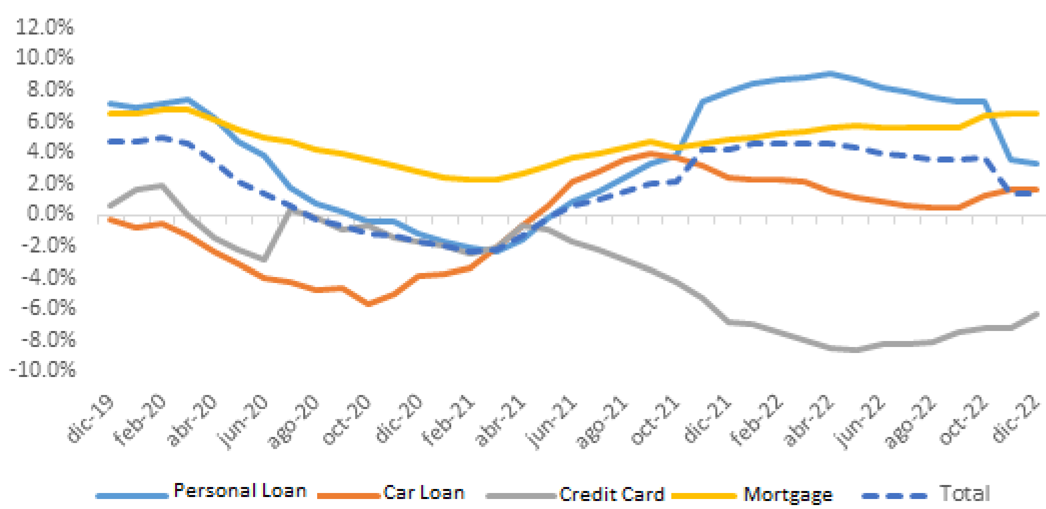


The remaining % belongs to financial sector loans.

Source: SBP with General License banks data.

In fact, in the last twelve months, household debt showed a 4.3% increase as of December 2022. At the onset of the pandemic, a lower boost was observed in household debt, providing single-digit growth rates. However, by the end of 2022, household debt has recovered its performance, like that of the nominal growth rate recorded before the pandemic (see **Graphic VII.3**).

Graph VII.3: Household Debt
December 2019 – December 2022



The most important product in retail banking is mortgage loans, which represents 58.3% of the total granted. However, in terms of several loans, the most substantial sub-item is the personal loan that totaled around 740,000 personal loans and represents 42% of total loans granted, which amount to USD 1.78 billion (see **Table VII.1**).

Table VII.1: Portfolios granted to retail banking by the SBN
December – 2022

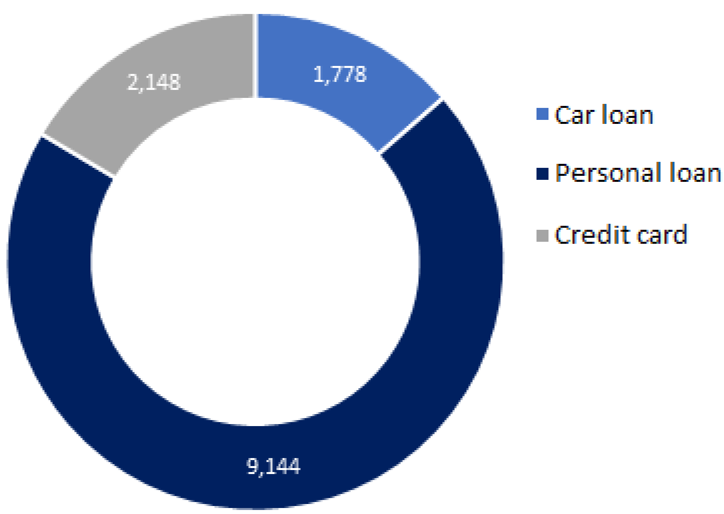
Loan type	Banking System (In millions of USD)	Banking System	Average Debt
Mortgages	18,264	286,755	63,692
Car loan	1,778	152,371	11,669
Personal loan	9,144	740,341	12,351
Credit card	2,148	593,654	3,618
Total	**31,333**	**1,773,121**	**17,672**

A. Household Debt

The consumer credit component (credit cards, personal loans, and car loans) represents 41.7% of the balance of household portfolio. This portfolio showed a total of USD 13.07 billion, in which the personal loan has the greatest share (see **Graph VII.4**).

Car loans showed a 1.7% increase, while the personal loan segment grew by 3.3%, and credit cards fell by 6.2%.

Graph VII.4: Household Debt – Consumer Credit
December 2022

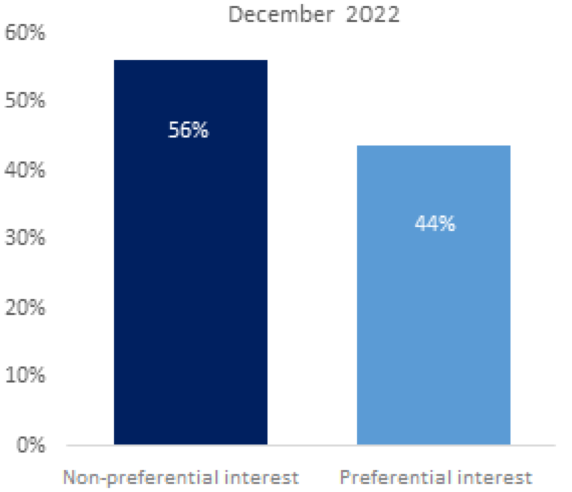


B. Housing Debt

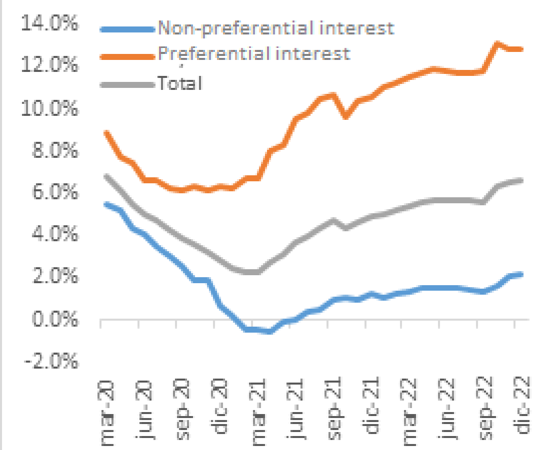
The balance in terms of mortgage loans is positive, since banks have been increasing mortgage loans granting significantly (6.6% growth); the balance of the portfolio as of December 2022 amounted to USD 18.27 billion.

In relation to the data on granting new home mortgage loans (new and second-hand homes) it shows that the number of loans that correspond to the preferential [interest rate] segment is higher. It is noteworthy that, from the balance perspective, the largest component of the portfolio corresponds to the non-preferential [interest rate] segment (56% of the total mortgage loan portfolio, see **Graph VII.5**).

Graph VII.5: Composition of Housing Loans December 2022



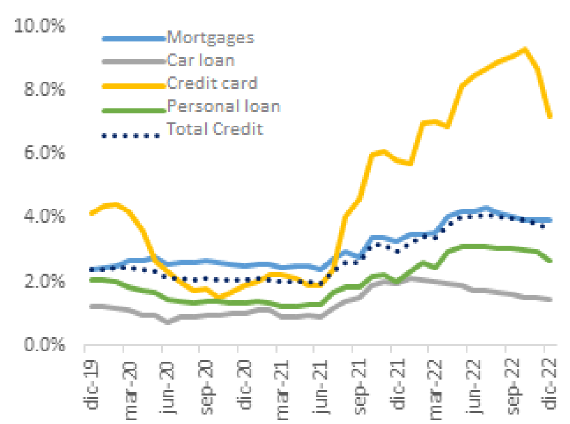
Graph VII.6: Preferential and Non-preferential Interest Rate Homes March 2020 - December 2022



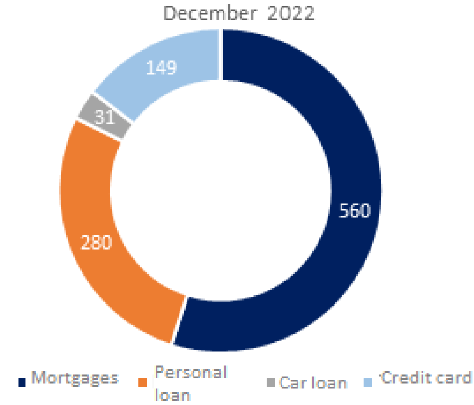
C. Household debt arrears indicator

According to the data reported in the Financial Stability Report for the first half of 2022, the quality of loans granted to households has improved slightly in some areas, reflected in a delinquency rate of 3.7% as of December 2022 (see **Graph VII.7**). This figure stood above the data of December 2021 and 2020. Credit card delinquency rate was 7.2% at the end of 2022.

Graph VII.7: Past due Portfolio: Household Loan % of total portfolio December 2019 - December 2022



Graph VII.8: Impaired portfolio balance: Household Loans In millions of USD December 2022

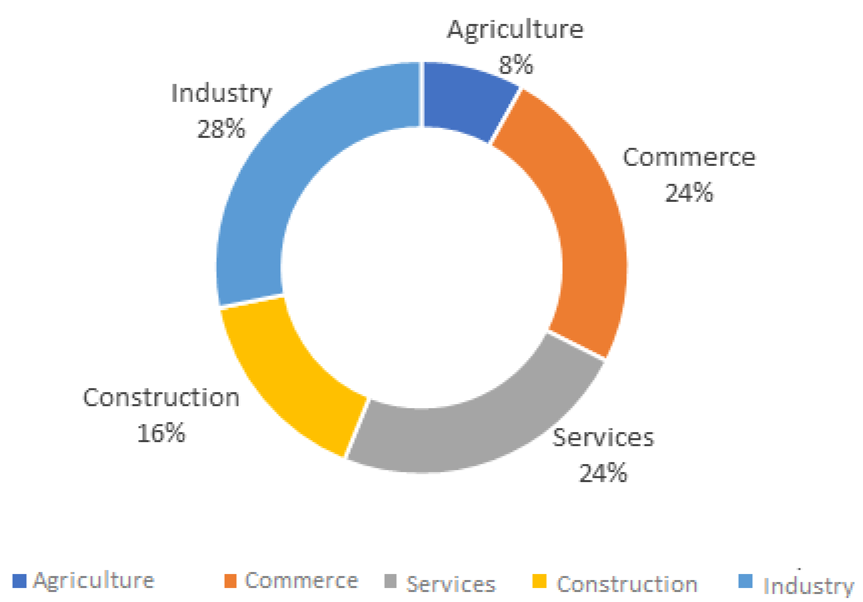


VIII. Credit Risk

In general, the recovery process of the different sectors has been positive, in which loans for home acquisition, personal loans, car loans, and credit cards has stood out. Within a productive structure, the sector that should generate more employment is the private sector, since the companies are the ones that demand greater volumes of financing, in addition to generating formal employment. The sectors within the corporate portfolio with the greatest share are those of commerce, services, and industry.

The main indicator that demonstrates the health or deterioration of the credit portfolio is the payment level of people or companies for their obligations. According to the Panamanian legislation, all credits that after the 30th day fall into the category of delinquent [loans] and those that on the 90th day are not in accordance with their contractual obligations will be considered nonperforming loans. This last category means that these clients have higher risks of non-payment.

Graph VIII.1: Credit Risk – Corporations
December 2022



The banking industry has been resilient to the ravages of the pandemic and the International Banking Center of Panama stands out for its relations with sectors such as industry, commerce, and services. This is how the banking business has been running operations for over 50 years, both domestically and internationally, with a 56% and 44% share, respectively.

Below is a sectoral analysis of the loans that present the highest percentage of arrears, according to the size of the loans granted. For this, we distribute the total portfolio by sectors, according to the disbursement strata.

Table VIII.1: Portfolio Quality – Agricultural Sector

Agriculture	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	1,870	1,357	3,226	0.72	0.22	3.56	5.25
2019	1,821	1,033	2,854	0.88	0.01	4.16	7.95
2020	1,788	1,181	2,969	0.83	0.46	6.76	1.55
2021	1,875	1,098	2,973	1.04	0.22	6.71	1.30
2022	2,020	1,200	3,220	0.56	0.00	6.05	0.57

Remarks: Data as of December of each year and balance in millions of USD.

The agricultural sector is made up of the following activities: fishing, livestock, agriculture, forestry, and timber farming. This sector has a balance of USD 3.22 billion.

In 2022, the past due portfolio represented 6.05% of the total agricultural portfolio, at the domestic level, which is extremely important since it was one of the highest indicators by sector, however, we must consider that this sector was affected by the ravages of the pandemic and strong climatic effects. In addition, in recent years, the price of supplies has increased.

Table VIII.2: Agricultural sector delinquency by series

Agropecuario	01 - Hasta 50 mil			02 - 50 a 100 mil			03 - 100 a 250 mil			04 - Arriba de 250 mil		
	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %
2018	316	1.17	3.55	255	1.23	4.90	617	1.34	4.77	2,038	0.41	4.15
2019	315	1.35	3.87	241	1.57	5.61	560	2.09	5.67	1,738	0.32	5.78
2020	298	0.98	5.95	230	1.21	8.52	526	1.21	10.13	1,915	0.66	2.54
2021	288	1.52	6.33	218	1.60	9.50	511	2.24	9.98	1,956	0.59	2.56
2022	288	1.17	6.65	221	1.13	9.43	490	1.30	9.46	2,222	0.25	1.93

Remarks: Data as of December of each year and balance in millions of USD.

As we can see (**Table VIII.2**), the tranches segregated in greater detail, based on the initial disbursement of loans from USD 50,000 to USD 250,000, there is a past due credit rate of over 9%, which represents a past due balance of USD 67 million between these 2 series.

Table VIII.3: Quality Portfolio – Commercial Sector

Commerce	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	5,973	2,176	8,149	0.84	0.26	3.65	0.64
2019	5,832	2,396	8,228	0.89	0.09	3.19	0.63
2020	5,145	2,318	7,463	0.79	0.23	3.26	0.73
2021	5,106	2,947	8,053	0.64	0.11	3.17	0.74
2022	5,707	4,008	9,715	0.72	0.16	2.99	0.42

Remarks: Data as of December of each year and balance in millions of USD.

The commercial sector is one of the main economic activities since it drives the country's growth by having an important share in the GDP.

Table VIII.4: Commercial Sector delinquency by series

Comercio	01 - Hasta 250 mil			02 - 250 a 1 millon			03 - 1 a 5 millones			04 - Arriba de 5 millones		
	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %
2018	1,461	1.30	3.84	2,180	1.18	3.30	2,768	0.87	2.95	1,739	-	1.29
2019	1,361	1.47	3.77	2,115	1.55	3.28	2,818	0.73	2.27	1,934	-	0.86
2020	1,163	1.10	4.43	1,909	0.96	3.10	2,570	0.81	2.18	1,821	0.39	0.98
2021	1,122	1.36	4.06	1,982	1.00	3.21	2,765	0.45	1.73	2,185	0.18	1.23
2022	1,305	1.21	3.67	2,184	1.26	2.67	3,195	0.84	1.73	3,031	-	0.86

Remarks: Data as of December of each year and balance in millions of USD.

The greatest balance concentration occurs in loans over USD 1 million. The delinquent and past due portfolio is concentrated in those loans that are granted for an amount of less than USD 250,000. These loans are profiled as riskier, which may be because of the experience and the type of business that, in some cases, are start-ups and require seed capital. They also tend to miss payment dates; however, as they develop and gain experience, they tend to be more stable.

Table VIII.5: Portfolio Quality – Services Sector

Services	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	5,314	4,019	9,333	0.54	0.31	1.48	1.12
2019	5,375	3,197	8,572	1.30	0.54	1.40	0.84
2020	5,432	2,887	8,320	0.84	0.52	1.76	1.47
2021	5,716	2,965	8,682	1.05	0.11	1.79	0.97
2022	5,965	3,477	9,442	1.09	0.36	2.26	1.03

Remarks: Data as of December of each year and balance in millions of USD.

The services sector, which includes telecommunications, transportation, tourism, among others, has gained great importance in the local economy, since the isthmus, thanks to its privileged geographical position, has stood out in the development of the tertiary sector and its potential has been attractive to logistics and technology companies. However, it still has a lot to exploit.

Table VIII.6: Services Sector delinquency by series

Servicios	01 - Hasta 250 mil			02 - 250 a 1 millon			03 - 1 a 5 millones			04 - Arriba de 5 millones		
	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %
2018	832	1.97	2.96	1,420	1.10	2.56	2,607	0.52	1.71	4,474	0.11	0.41
2019	764	2.75	3.21	1,327	1.72	2.45	2,399	1.75	1.76	4,082	0.62	0.07
2020	739	3.01	3.99	1,269	1.56	2.89	2,292	0.44	1.97	4,020	0.45	0.67
2021	665	3.61	3.78	1,304	1.55	2.85	2,487	1.05	2.23	4,225	0.49	0.32
2022	713	2.36	4.16	1,279	1.93	3.40	2,604	1.36	2.15	4,846	0.54	0.85

Remarks: Data as of December of each year and balance in millions of USD.

In the last year, the risky portfolio has increased, especially that whose disbursement is less than USD 250,000, where 2.36% is deemed delinquent and 4.16% is past due.

Table VIII.7: Portfolio Quality – Construction Sector

Construction	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	6,506	1,529	8,035	0.92	0.66	1.16	0.76
2019	6,288	1,363	7,651	1.60	0.09	1.88	0.74
2020	5,791	1,086	6,877	1.56	0.05	2.78	0.71
2021	5,309	1,077	6,387	0.76	0.05	2.82	0.38
2022	5,080	1,209	6,289	2.47	0.10	3.99	0.37

Remarks: Data as of December of each year and balance in millions of USD.

Construction stands out as the main domestic activity. As for its risk profile, arrears in the payment of domestic loan installments exceed 6%, while external arrears are only of 0.74%, which does not represent an indicator of significant deterioration. This is an activity that takes place in operations with lines of credit in the short- and medium-term and depending on meeting payments, the lines of credit can be renewed. During the [real estate] development process, these lines of credit come to be secured with a real estate or other collateral, in accordance with the business plan and with housing sales contracts or secured by the State, if it were a public infrastructure project.

Table VIII.8: Construction Sector delinquency by series

Construcción	01 - Hasta 250 mil			02 - 250 a 1 millon			03 - 1 a 5 millones			04 - Arriba de 5 millones		
	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %
2018	834	1.02	2.07	1,472	1.12	0.96	2,036	0.79	2.36	3,693	0.88	0.21
2019	839	1.63	3.32	1,543	1.31	2.32	1,915	2.15	2.36	3,354	1.41	0.57
2020	817	2.32	4.92	1,471	1.69	3.76	1,795	0.88	2.47	2,793	1.71	1.04
2021	833	0.87	3.12	1,384	0.75	3.13	1,697	1.24	2.32	2,473	0.40	1.83
2022	785	1.52	6.12	1,217	1.88	4.66	1,733	3.21	3.71	2,555	2.55	1.49

Remarks: Data as of December of each year and balance in millions of USD.

The largest balances of construction loans are in the series that exceed USD 5 million. In those loans under this range (USD 5 million), their delinquency increased in 2022, with arrears of more than 30 and 90 days.

Table VIII.9: Portfolio Quality – Industrial Sector

Industry	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	3,361	5,009	8,371	0.23	0.03	0.55	0.17
2019	3,299	4,797	8,096	0.34	0.24	0.86	0.28
2020	2,764	4,504	7,267	0.14	0.04	3.29	0.42
2021	2,835	6,029	8,864	0.14	0.10	1.12	0.59
2022	3,427	7,798	11,226	0.14	0.06	0.84	0.42

Remarks: Data as of December of each year and balance in millions of USD.

The secondary sector groups a significant number of activities, which have a relevant share in external lending, mainly in the sub-activity of electricity generation and distribution, unlike the other listed activities.

Table VIII.10: Industrial Sector delinquency by series

Industria	01 - Hasta 250 mil			02 - 250 a 1 millon			03 - 1 a 5 millones			04 - Arriba de 5 millones		
	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %	Saldo	Moroso %	Vencido %
2018	280	0.99	2.08	712	1.08	1.06	1,908	0.10	0.72	5,469	0.13	0.00
2019	310	0.68	0.92	690	1.28	0.93	1,881	0.37	0.51	5,216	0.18	0.44
2020	281	1.14	2.86	624	0.24	1.84	1,708	0.32	0.92	4,655	-	1.60
2021	308	0.74	3.90	711	0.46	0.90	1,724	0.18	0.79	6,121	0.07	0.57
2022	338	1.11	1.77	834	0.54	0.84	2,147	0.19	0.95	7,906	0.05	0.36

Remarks: Data as of December of each year and balance in millions of USD.

For the most part, the clients of this type of loan satisfactorily meet their payments and there is little delinquency. Loans below USD 250,000 have the highest level of arrears, which are distributed as follows: from 31 to 90 days, 1.11%; and 1.77% for past due loans.

Table VIII.11: Portfolio Quality – Mortgage Sector

Mortgage	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	16,984	375	17,359	3.2%	2.2%	2.0%	1.0%
2019	17,819	302	18,121	3.2%	0.9%	2.5%	0.9%
2020	18,009	255	18,264	2.8%	1.3%	2.6%	1.9%
2021	18,749	195	18,944	2.9%	0.7%	3.2%	3.2%
2022	19,797	92	19,889	3.0%	0.7%	3.8%	6.1%

Remarks: Data as of December of each year and balance in millions of USD.

An attractive component of bank financing, at the local level, are residential mortgages. This credit product produces attractive returns for banks because of the competitive rates offered, and for the financing period.

Table VIII.12: Mortgage Sector delinquency by series

Residential mortgage	Balance in millions of USD	Delinquency in %	Past due in %	Quantity
Up to USD 45,000	2,739	4.8%	5.9%	122,058
From USD 45,000 to USD 80,000	4,463	3.2%	3.4%	87,084
From USD 80,000 to USD 120,000	3,711	2.3%	2.6%	41,325
From USD 120,000 to USD 150,000	1,196	2.6%	4.3%	10,102
From USD 150,000 to USD 180,000	1,072	2.9%	4.3%	7,393
From USD 180,000 to USD 500,000	4,319	2.8%	4.5%	18,647
From USD 500,000 to USD 1 M	892	2.7%	2.9%	1,620
Over USD 1 M	1,405	2.3%	2.0%	558

Remarks: Data as of December of each year and balance in millions of USD.

The largest amount of loans is observed in homes with prices below USD 120,000. Loans under USD 45,000 have benefits in the interest rate subsidized by the Government but represent a higher risk in meeting payments and add up to more than 122,000 in loans granted. The residential mortgage loan component, between USD 45,000 and USD 80,000, also with attractive rates (preferential interest rates) is the second riskiest segment in terms of delinquency.

Table VIII.13: Portfolio Quality – Personal Loan

Personal Loans	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	7,757	403	8,160	2.2%	1.1%	1.8%	0.9%
2019	8,308	449	8,758	2.0%	0.5%	2.0%	0.8%
2020	8,205	398	8,604	1.8%	1.0%	1.3%	0.7%
2021	8,853	647	9,500	2.4%	0.1%	2.0%	0.4%
2022	9,144	725	9,869	1.9%	0.2%	2.7%	0.3%

Remarks: Data as of December of each year and balance in millions of USD.

Table VIII.14: Personal Loan delinquency by series

Personal Loan	Balance in millions of USD	Delinquency in %	Past due in %	Quantity
Up to USD 5,000	200	4.0%	10.0%	234,174
From USD 5,000 to USD 10,000	848	2.9%	5.0%	162,949
From USD 10,000 to USD 20,000	1,966	1.9%	2.8%	185,495
From USD 20,000 to USD 40,000	2,803	1.7%	1.9%	128,665
From USD 40,000 to USD 60,000	1,687	1.3%	1.4%	43,183
From USD 60,000 to USD 100,000	819	2.0%	2.2%	13,715
From USD 100,000 to USD 500,000	601	4.1%	4.4%	4,135
From USD 500,000 to USD 1 M	108	0.7%	3.3%	218
Over USD 1 M	114	3.5%	2.1%	81

Remarks: Data as of December of each year and balance in millions of USD.

Personal loans are fragmented into small series, under USD 5,000, with an important number of over 234,000 placements, but it is the series that reports the most delays in payments, of over 90 days, thus showing a past due portfolio of around 10%, followed by the USD 5,000 to USD 10,000 series that brings together more than 162,000 loans.

Table VIII.15: Portfolio Quality – Car Loans

Car Loans	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	1,781	108	1,889	5.0%	45.6%	1.1%	0.3%
2019	1,776	90	1,865	6.3%	69.7%	1.2%	0.0%
2020	1,707	93	1,800	4.9%	50.8%	1.0%	0.0%
2021	1,749	61	1,810	5.6%	53.6%	2.0%	0.0%
2022	1,778	36	1,813	4.1%	48.9%	1.4%	0.0%

Remarks: Data as of December of each year and balance in millions of USD.

Table VIII.16: Car loan delinquency by series

Car Loan	Balance in millions of USD	Delinquency in %	Past due in %	Quantity
Up to USD 10,000	52.8	4.9%	2.9%	10,522
From USD 10,000 to USD 20,000	881.6	3.6%	1.7%	94,492
From USD 20,000 to USD 60,000	819.0	2.7%	1.0%	47,451
From USD 60,000 to USD 100,000	22.8	2.0%	1.8%	464
From USD 100,000 to USD 500,000	1.5	2.4%	0.1%	20

Remarks: Data as of December of each year and balance in millions of USD.

In general, car loans have few payment arrears and are usually granted in shorter periods than a mortgage. The delinquent portfolio of these car loans is between 4.9% and 3.6% for series between USD 10,000 and USD 20,000, respectively. It should be noted that the largest number of loans is between the USD 10,000 and USD 60,000 series and the default rate in payment of more than 90 days is low.

Table VIII.17: Portfolio Quality – Credit Cards

Credit cards	Balance in millions of USD			Delinquency in %		Past due in %	
Years/Dec.	Domestic	External	Total	Domestic	External	Domestic	External
2018	2,482	56	2,538	3.7%	3.2%	4.0%	2.8%
2019	2,498	53	2,552	3.5%	2.9%	4.1%	6.4%
2020	2,457	42	2,498	3.4%	1.8%	1.9%	8.6%
2021	2,291	42	2,333	6.3%	1.9%	4.4%	5.9%
2022	2,148	56	2,203	3.4%	1.7%	7.2%	5.7%

Remarks: Data as of December of each year and balance in millions of USD.

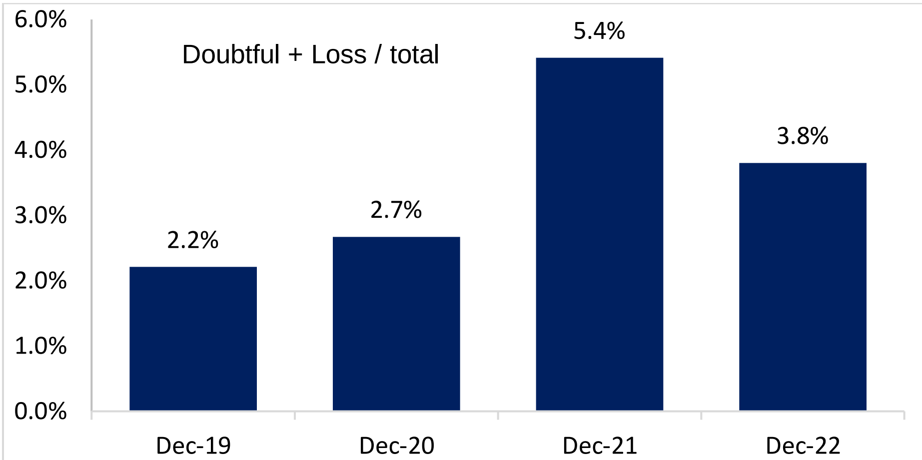
Table VIII.18: Credit Cards delinquency by series

Credit cards	Balance in millions of USD	Delinquency in %	Past due in %	Quantity
Up to USD 1,000	76.5	6.8%	11.5%	118,664
From USD 1,000 to USD 5,000	482.3	4.4%	7.6%	252,863
From USD 5,000 to USD 10,000	487.0	3.4%	6.6%	110,170
From USD 10,000 to USD 20,000	701.5	2.8%	6.0%	93,510
From USD 20,000 to USD 40,000	326.8	2.8%	8.7%	26,360
From USD 40,000 to USD 60,000	54.9	2.0%	10.5%	2,525
From USD 60,000 to USD 100,000	15.2	1.5%	4.3%	495
Over USD 100,000	3.5	3.7%	3.7%	59

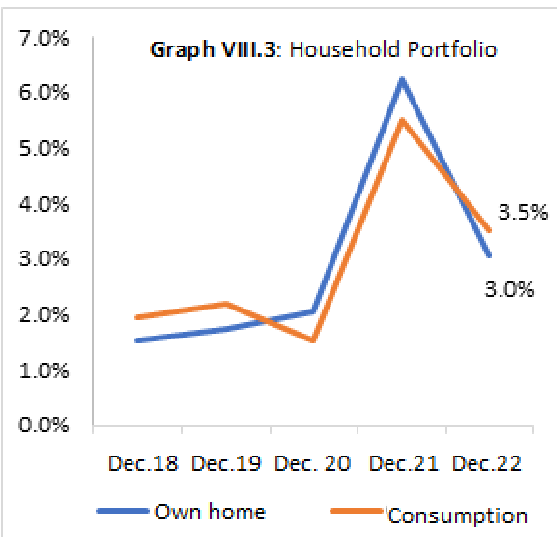
Remarks: Data as of December of each year and balance in millions of USD.

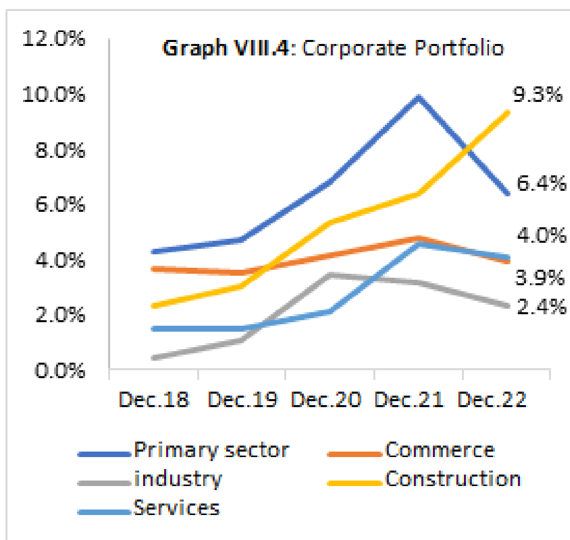
Very little or no collateral is requested to grant credit cards and it is usually by reference in the borrower's profile, who must maintain a good credit record. Most of the credit cards granted have a limit of less than USD 5,000, which is updated as the facility is adequately managed. An almost similar default profile can be observed, both in lower and higher series, this could be because of punctuality on the payment date.

Graph VIII.2: Credit Risk Indicator – Adverse Portfolio Indicator: Doubtful + Loss/Total Credit)
December 2019 – December 2022



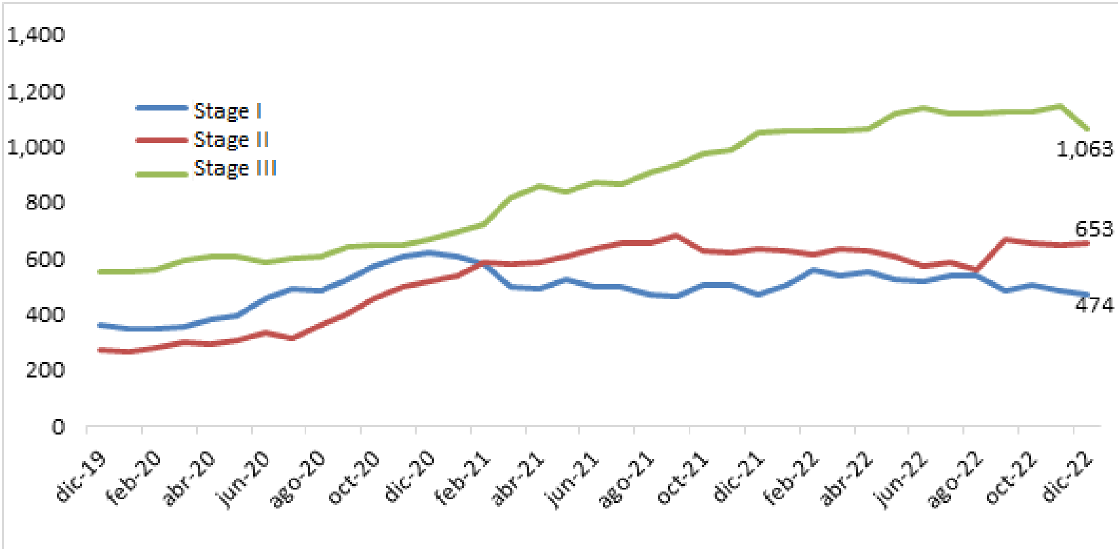
The amount of loans considered higher risk has decreased in recent months, especially doubtful loans, because of write-offs, among other reasons. This can be seen in the drop of the indicator from 5.41% to 3.80%.





Household activities, both mortgages and consumption, have improved their credit risk indicator. In corporate activities, construction has significantly deteriorated its indicator. The activity with the best performance in terms of the credit risk level is the industrial sector. Despite that doubtful and loss loans show a slight improvement, they continue to maintain levels higher than those observed prior to the pandemic, and, for this reason, they are closed monitored, considering that modified loans are no longer available.

Graph VIII.5: Coverage Level – Provisioning (IFRS 9)



Provisioning for the total domestic portfolio stood at USD 2.19 billion, which represents a reduction in loans with a higher risk profile. The coverage level of loan provisions is 3.7%. Although the ratio slightly decreased (by 1%) compared to 2021, the SBN still maintains good coverage levels. Of this amount, 48.5% corresponds to loans recorded in stage 3, as provided for in IFRS 9 and are loans considered impaired, which could cause a considerable portion of the portfolio to be written off.

As for provisions by activity, household represents 50% of the total, of which mortgage housing accounts for 28%. On the corporate side, the construction sector has the highest level of provisions followed by commercial activity and services.

IX. Loan-to-value (LTV) analysis

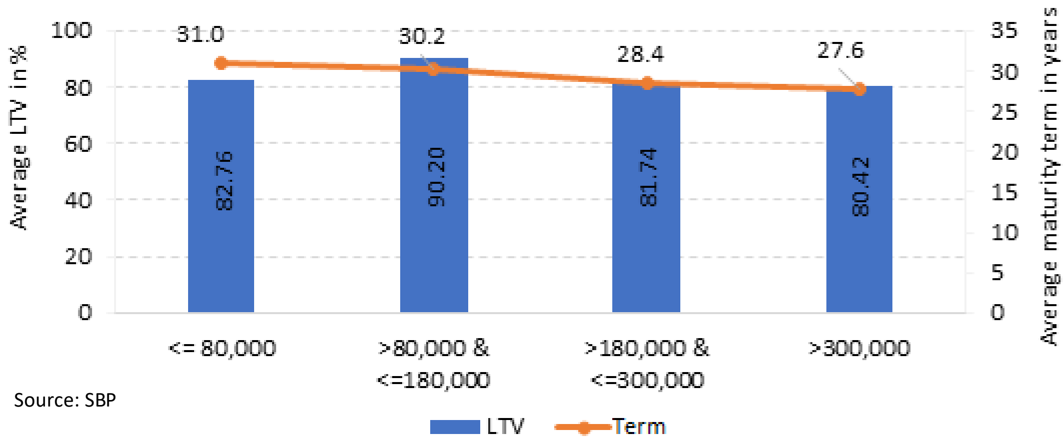
The loan-to-value (LTV) ratio is an indicator used to measure the financial situation of households and it is of utmost importance for the definition of the macroprudential policy. The Superintendency calculates the LTV ratio as the quotient between the initial loan value and the collateral, both for the mortgage and the car loan portfolios.

LTV of the Mortgage Portfolio

As of December 2022, mortgage loans represent around 31% of total banking system loans. Therefore, the LTV is an important indicator for monitoring and managing the credit risk of the mortgage portfolio.

A high LTV indicates that households make a reduced down payment (or initial payment) to purchase a home, which leads to high payments during the life of the loan or longer terms to cover the entire loan.

Graph IX.1: Average LTV of the mortgage portfolio
2022



Source: SBP

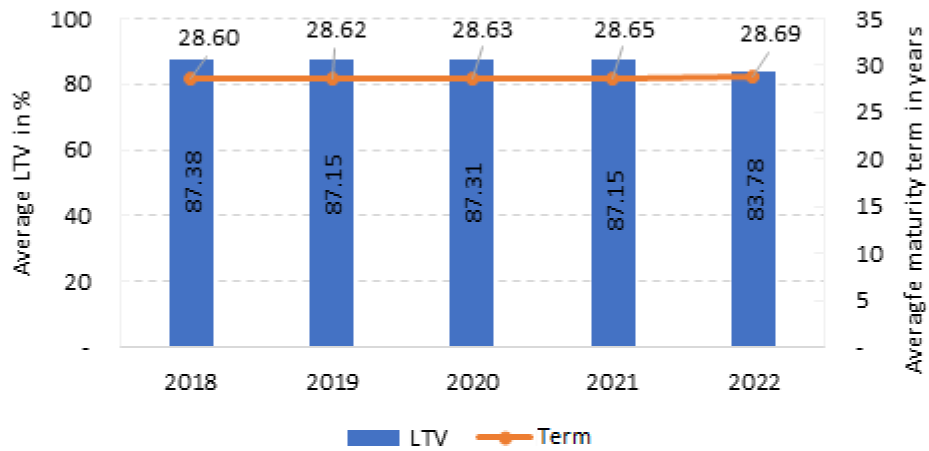
During 2022, the average LTV for mortgage loans stood at 83.3%, where the segment of homes ranging from USD 80,000 to USD 180,000 is the one with the highest LTV with 90.2%, with an average maturity term of 30 years. However, the segment of less than USD 80,000 is the one with the highest concentration of the number of loans with almost 60%.

It should be noted that the Panamanian government has the Housing Solidarity Fund program, with which the government grants a USD 10,000 contribution as down payment to individuals or families who wish to acquire their first home under USD 70,000. This benefit has a positive impact on the mortgage LTV, since it helps the segment of homes under USD 70,000 to maintain an acceptable LTV.

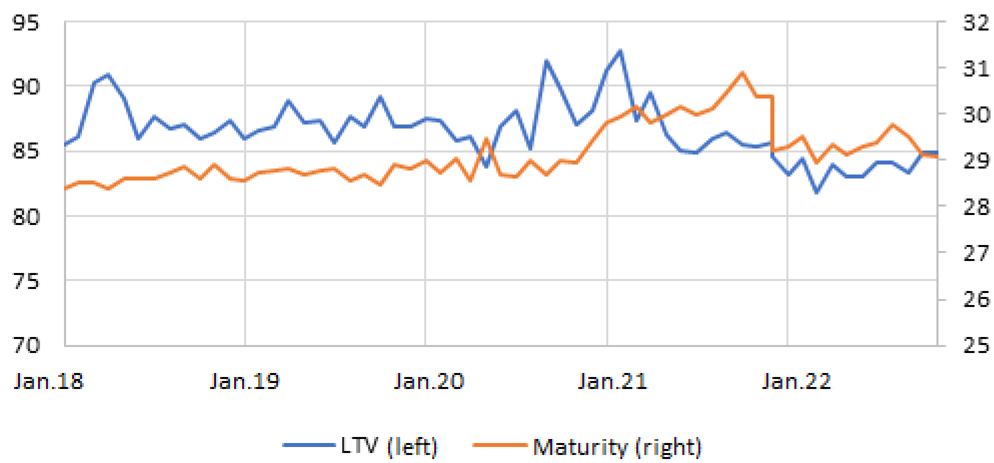
When comparing the LTV during the last 5 years, its 2022 average decreased by 4.4 p.p. approx., which indicates a considerable improvement of this indicator. Regarding the average term, it has remained stable during the last 5 years.

When analyzing the monthly indicator, it is observed that the greatest increase was between late 2020 and early 2021, and the longest period recorded was at late 2021.

Graph IX.2: Average LTV of the mortgage portolio
2018 - 2022



Graph IX.3: Evolution of LTV Mortgage
2018 - 2022



On the other hand, when analyzing the LTV grouping it by tranches (see **Table XI.1**), it is observed that 78% of total mortgage loans granted is in the tranche between 80% and 100%, with an initial value of USD 128.95 million, i.e., the greatest risk is concentrated in LTV greater than 80%. An LTV classified as acceptable is less than 80%, however, since the greatest risk is concentrated in the segment of more than 80% LTV, it indicates that the Panamanian households are making less down payment to purchase a home, which can incur a possible default coupled with the fact that the average mortgage loans term is 30 years. It should be noted that by 2022 a significant improvement in this indicator was observed.

Table IX.1: LTV of the mortgage loans by tranches
December 2022

LTV tranches	Percentage of loans	Initial Value in millions of USD	Collateral in millions of USD
LTV < =50%	2.4%	4.71	12.00
50% < LTV >= 80%	19.1%	33.22	46.63
80% < LTV >= 100%	78.2%	128.95	141.89
LTV >100%	0.2%	0.61	0.58

As for the LTV by type of mortgages, it is observed that the primary residence shows an LTV of 86%, with an average maturity of 31 years, this segment represents 93.5% of the total mortgage portfolio. While the second home (country/beach/holiday house) presents an LTV of 73%, with an average maturity of 25 years.

Table IX.2: LTV of the mortgage portfolio by type of home
December 2022

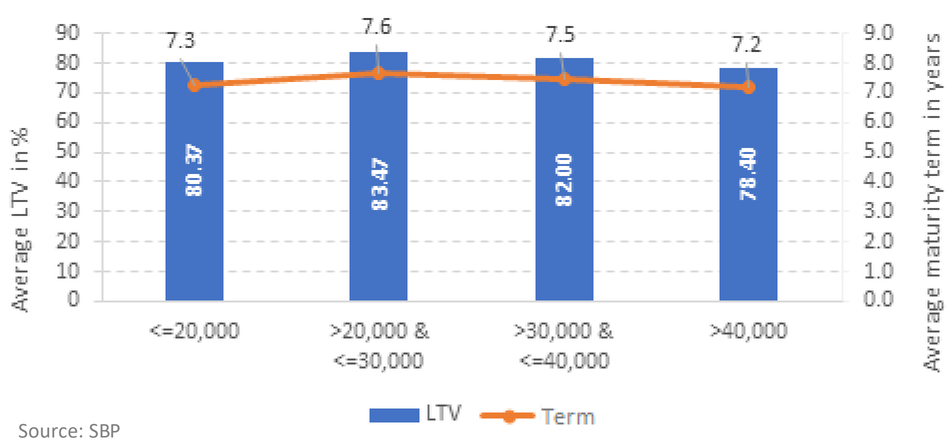
Activity	LTV in %	Maturity in years	Share in %
Primary residence	85.98	30.92	93.54
Second home	72.79	25.19	6.46

It is noteworthy to mention that the LTV is always calculated at the time of loan origination, but if the loan balance is used on some occasions, the LTV is higher due to restructuring, or if the loan has incurred in default, since interest is added to the loan balance.

LTV of the Car Portfolio

Car loans represent 3% of total banking system loans, while of the total consumer loans (personal loans, credit cards, and car loans) they represent 14%. Although the share percentage is much lower compared to mortgage loans, the LTV is also monitored.

Graph IX.4: Average LTV Car Portfolio
2022

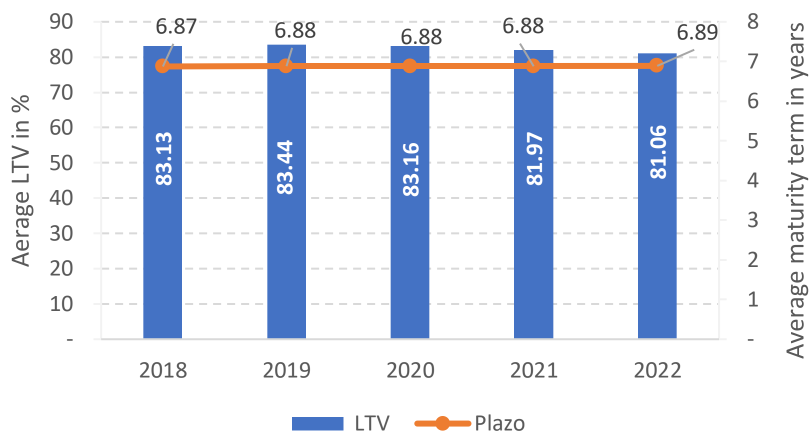


Source: SBP

The average LTV for car loans for 2022 stood at 81%. The segment between USD 20,000 and USD 30,000 is the one with the highest LTV and those with a value of more than USD 40,000 maintain an LTV below the average. It should be noted that the volume of loans is less than USD 20,000 both in number and in initial value. While the maturity term for all segment loans is 7 years.

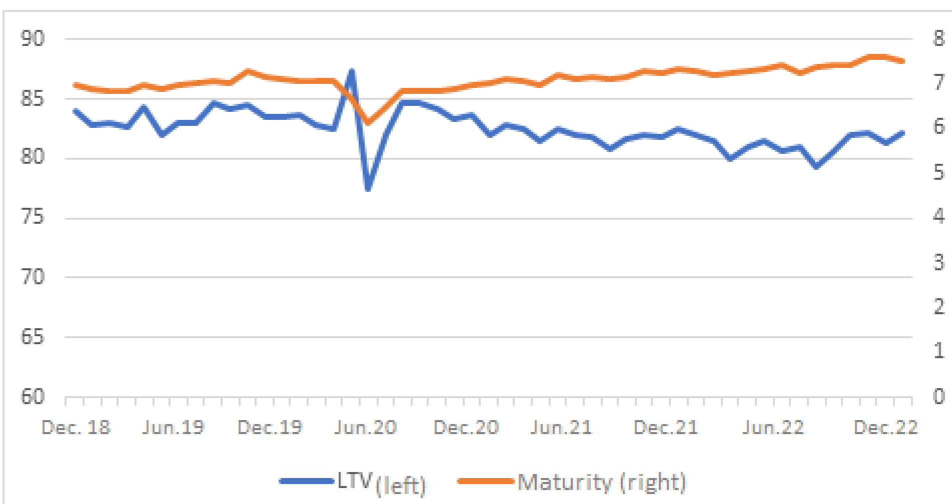
Like the LTV for mortgage loans, the LTV for car loans for 2022 presents a decrease compared to those recorded in the last 4 years. When looking at it per month in 2020, the highest data is reflected, however, the term per month remains stable.

Graph IX.5: Average LTV Car Loans and Maturity Term
2018-2022



Source: SBP

Graph IX.6: Evolution of Car Loan LTV
2018-2022



On the other hand, when analyzing the LTV grouping it by tranches (see **Table IX.3**), it is observed that 71% of the total car loans granted is in the tranche between 80% and 100%, with an initial value of USD 24.68 million.

Table IX.3: LTV of the car loans by tranches
December 2022

LTV tranches	Percentage of loans	Initial Value in millions of USD	Collateral in millions of USD
LTV < =50%	3.6%	0.91	2.30
50% < LTV >= 80%	25.5%	8.96	12.98
80% < LTV >= 100%	70.7%	24.68	27.67
LTV >100%	0.1%	0.02	0.02

X. Credit Concentration Risk

Credit concentration risk is the possibility that a bank has a significant credit exposure with an individual counterparty or a group of related counterparties or that has credit exposures in the same economic sector or geographic location, i.e., that it does not have a diversified credit portfolio. If the individual counterparty or economic sector has difficulties, it may cause losses to the bank that threaten its stability or its ability to maintain its central operations[1].

Given the foregoing, credit concentration risk can be divided into two types: individual concentration risk and sectoral concentration risk. Individual concentration risk is associated with a group of exposures that have a significant weight in the credit portfolio and, for these cases, clients who exceed a certain limit or exposure are monitored. While the sectoral concentration risk occurs when the probability of default is linked to common underlying factors in certain economic sectors or activities.

Since concentration risk mismanagement or incomplete measurement can cause financial problems for banks, concentration risk measurement is important from a macroprudential point of view.

This section analyzes the concentration by economic sectors and large banking clients, all for the domestic portfolio.

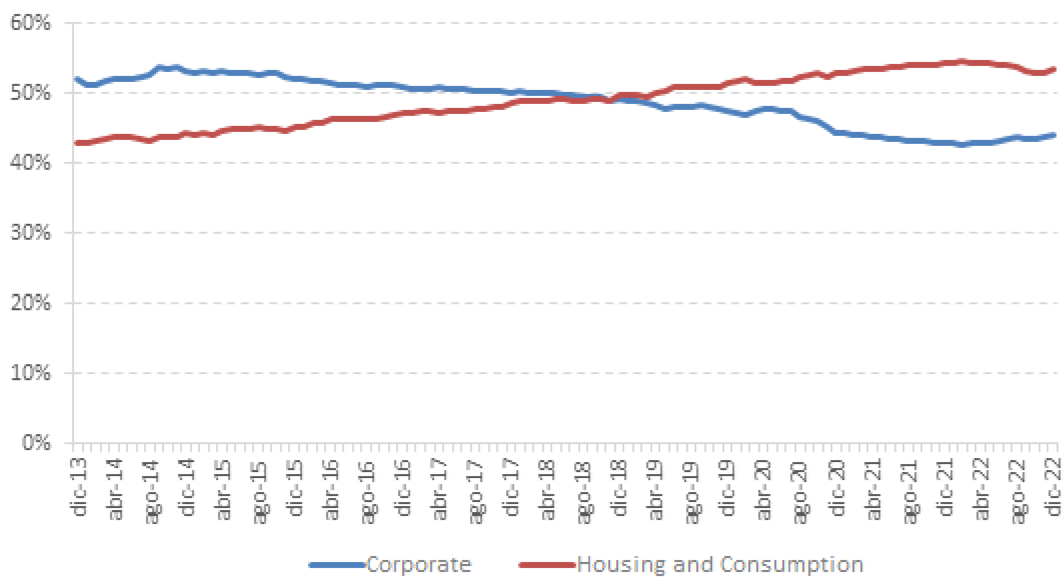
[1] https://www.bis.org/publ/bcbs128.pdf

Table X.1: Domestic credit balance by economic activity and share.
December 2022

Domestic credit	Balance in millions of USD	Share (%)
Residential mortgage	18,263.63	31.17%
Personal consumption	13,069.32	22.31%
Commerce (inc. commercial mortgage)	7,240.38	12.36%
Services	5,964.86	10.18%
Construction	5,079.91	8.67%
Industry	3,427.47	5.85%
Primary sector	2,065.95	3.53%
Other activities	3,474.57	5.93%

Consumer activities directly related to households are the ones with the greatest share in the total credit portfolio, by December 2022 they stood at 53.3%, i.e., they represent more than half of the banking system credit. However, until early 2018, corporate activities had a greater share in total loans.

Graph X.1: Domestic credit share by type
2018-2022



It is worth mentioning that of the 42 banks that make up the National Banking System, 10 have mortgage housing as their main activity, i.e., these banks hold in their portfolios more than 30% share in the mortgage housing activity. While 8 banks have personal consumption (including personal loan, car loan, and credit card) as main activity, where they concentrate more than 20% of their portfolios.

Most of these banks, which are purposely dedicated mainly to the housing mortgage activity, focus on certain categories of borrowers or home segments, which means that their portfolios are of good quality and, therefore, have low delinquency rates, despite presenting considerable concentrations. It must be taken into consideration that most debtors have direct discount orders for mortgage payments.

As for corporate activities, commerce is the one with the greatest share with 12.4%, followed by services with 10.2%. From the 42 banks that make up the National Banking System, 16 bank have these activities as their main credit portfolios with more than 20% share. Small banks are the ones that have a less diversified portfolio; therefore, they are more focused on certain activities or companies.

If the percentage of concentration for each economic activity is observed separately, it is relatively lower than housing and consumption, so to have a measure of the level of concentration of economic activities in the National Banking System, a sector concentration index (SCI) was calculated where the total balance of each economic sector (only corporate activities) are taken into consideration. The formula of this index is as follows:

$$SCI = \sum Balance\ Activity^2 / (\sum balance\ activity)^2$$

The result for December 2022 was an SCI of 19.10% and for December 2021 it stood at 19.76%, which indicates a slight improvement for 2022.

This result indicates that the level of concentration of economic activities is relatively lower compared to consumer activities and mortgage housing, to verify this, the Herfindahl Hirschman Index (HHI) was calculated.

The HHI was calculated using the share of each of the sectors in the total loan portfolio, as follows:

$$HHI = \sum_{i=1}^{N} w_i^2$$

For December 2021, the HHI for corporate activities stood at 413.41, which proves that banks do not have high concentrations in economic activities.

For consumer activities and housing mortgages, the HHI is 1469.46, which is higher than the corporate HHI, but still is a low concentration since the recommendations indicate that more than 2,500 is high concentration.

Although the banks have low concentrations in their credit portfolios, it is important to measure the individual concentration and, for this, clients who maintain balances of more than USD 15 million were taken into consideration. In total, 190 companies distributed in 26 banks were considered. These companies represent 16% of the balance of domestic credits and the debtor with the highest balance belongs to the electricity sector, with 1.31% share in the total domestic portfolio.

The HHI was calculated for each of the 26 banks that have large exposures, and it was found that 22 banks have a low HHI (with less than 1000). But when calculating the HHI for the banking system it turned out to be 24.18. The banks that presented the highest concentration are small banks and their business model is focused on certain niches or economic sectors.

Table X.2: HHI measured for large exposures by bank

HHI	Banks
10 - 100	14
101 - 1000	8
Más de 1000	4

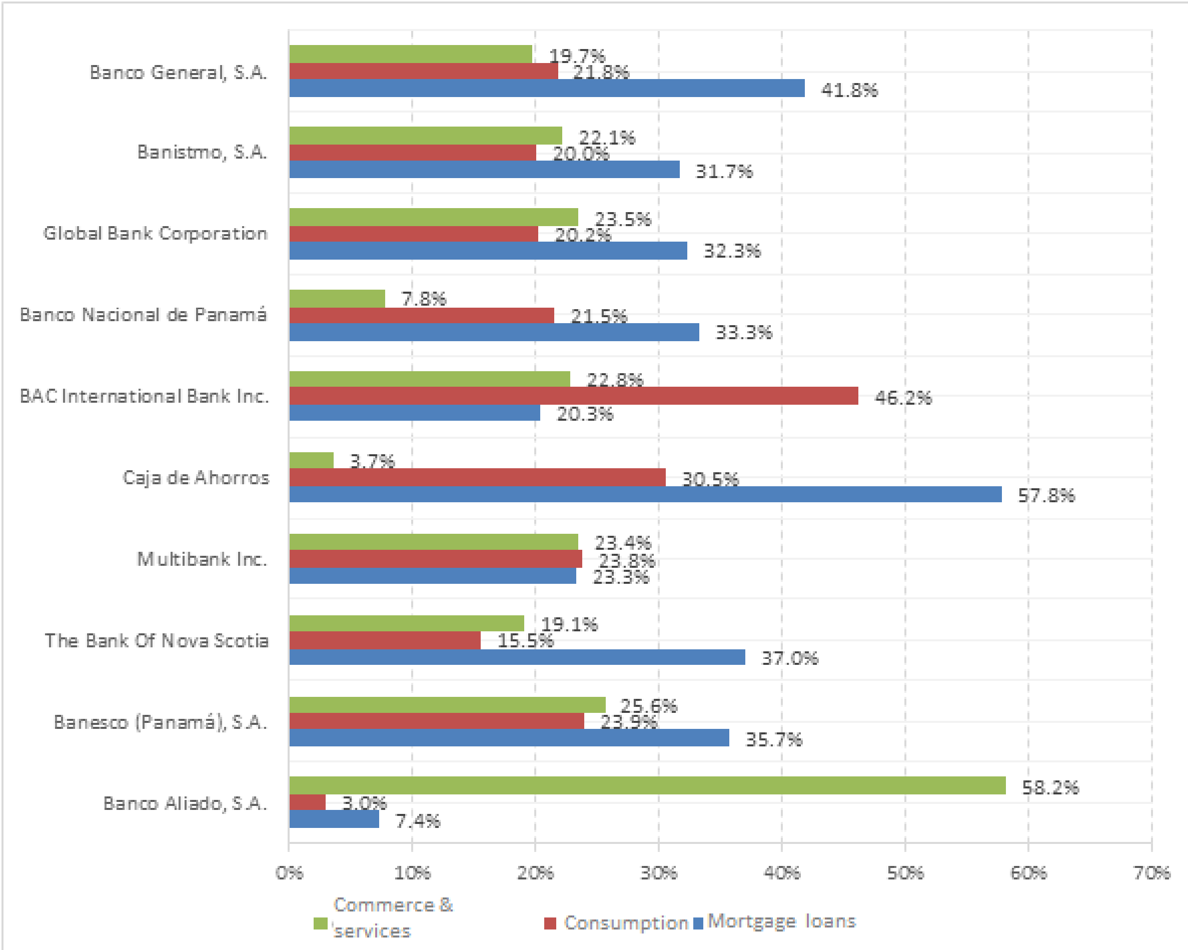
On the other hand, when measuring the banks share in total domestic credit, 10 banks represent 83.2%, being Banco General, S.A. the one with the largest share, followed by Banistmo, S.A.; these two banks account for 30.7% of the total domestic portfolio.

As for the main activities that these banks are engaged in, they are mostly mortgage housing, followed by commerce and services.

Table X.3: Share of banks in total domestic credits

#	Banks	Share
1	Banco General, S.A.	17.52%
2	Banistmo, S.A.	13.15%
3	Global Bank Corporation	10.13%
4	Banco Nacional de Panamá	10.11%
5	BAC International Bank Inc.	6.90%
6	Caja de Ahorros	6.86%
7	Multibank Inc.	5.91%
8	The Bank of Nova Scotia	5.11%
9	Banesco (Panamá), S.A.	4.28%
10	Banco Aliado, S.A.	3.19%
	Total	**83.2%**

Graph X.2: Share of main activities by bank
December 2022



Other Concentration Risks

Concentration risk is not only associated with loans granted, but also with significant exposures to assets or liabilities that, in case of disturbances in certain markets or economic sectors, could threaten the financial entity's stability.

The concentration of liabilities (depositors), such as investment concentrations, also belongs to the banks' liquidity risk. In addition to the concentration risk, there is the dependence on financing sources and dependence on a particular IT system. The latter is inherent to the operational risk area.

1. Liabilities (deposits) concentration risk

In this section, a brief analysis of the concentration of domestic deposits in the banking system is made, however, the impact that deposit withdrawals could have been not studied since, as mentioned, this directly affects the bank’s liquidity, which it is further explained in the section on liquidity coverage and stress tests.

Table X.4: Balance of domestic deposits by type of deposit and share
December 2022

Type of client	Balance in millions of USD	Share
Government	12,099.63	19.38%
Customers	46,912.47	75.15%
Banks	3,411.29	5.46%
Total	**62,423.39**	**100.00%**

Domestic customer deposits represent 75.2% of total domestic deposits, followed by government deposits that account for 19.4% of total domestic deposits.

Customer deposits are made up of approximately 60% legal persons and the remaining natural persons; 50.6% of customer deposits are term deposits.

Table X.5: Domestic customer deposits by type of deposits
December 2022

Customer deposits	Balance in millions of USD	Share
Demand	9,242.87	19.70%
Term	23,756.36	50.64%
Savings	13,913.24	29.66%
Total	**46,912.47**	**100.00%**

Customer deposits is the one with the greatest share in total domestic deposits. The analysis will be focused on this segment. With the objective of knowing the level of concentration of deposits in the banking system, the 5 largest clients of the 40 operating banks that hold domestic deposits were taken, and how much these clients represent in the total domestic deposits of each entity was measured. Those entities that have a high share of these large deposits, if at any time the deposits of these large clients are withdrawn, may face a liquidity risk. Additionally, banks were grouped by size according to total assets as follows: large banks above USD 3 billion; medium banks from USD 1 billion to USD 3 billion; and small banks below USD 1 billion.

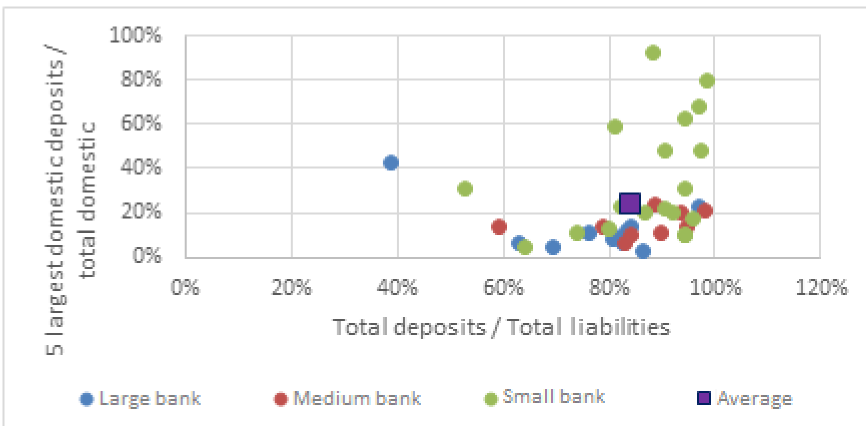
In total, 198 of these large deposits were obtained, which represent 10.1% of total banking system deposits, of which 5% are concentrated in 5 large banks based on their total assets; and the total domestic deposits of these 5 banks represent 55% of the total domestic.

Table X.6: Average share of 5 largest banks vs. Total domestic deposits by bank size

Bank size	Average 5 largest domestic deposits/total domestic
Large	12.22%
Medium	14.48%
Small	34.36%

It can be observed that small banks have, on average, a greater share in terms of large deposit clients, while large and medium-sized entities show a lower level of concentration, even less than the banking system average.

Graph X.3: Share level of large deposits by bank size
December 2022



Therefore, it can be concluded that the banking system does not present high levels of concentration of deposits, although deposits represent most banks' liabilities.

<u>SBN response capacity in a bank resolution scenario:</u>

All banking systems in the world have bank resolution tools that allow them to deal with certain bank failures, solvency, or illiquidity scenarios. Typically, most countries have bank resolution tools such as the lender of last resort, a liquidity line for systemic banks, a deposit insurance, among others; however, there is always concern that a moral hazard event may occur, knowing that the Government would address financial problems because of the mismanagement of the board of directors of banking institutions.

Analyzing the current Panamanian model, where the focus is primarily on maintaining effective and preventive supervision, where the main objective is to avoid a compulsory liquidation, with which savers are affected. The regulatory framework in this matter is based on corrective actions, included in the powers established in the Banking Law of 2008.

The SBP is aware of the need to reform the current legal framework, which includes many tools that facilitate the bank resolution process.

Similarly, international resolution practices and standards recommend having a robust legal framework for crisis management and resolution.

With IMF's technical assistance, the SBP drafted a bill to strengthen the bank resolution framework and bring it closer to best practices and international standards. The bill has been submitted to the Ministry of Economy and Finance and is still under discussion.

Regarding the resilience capacity that the Panamanian banking system can have, it is important to analyze the SBN deposit structure.

When grouping the customer deposits by amounts, it is observed that deposits under USD 10,000, in number of accounts and number of clients, account for 93.4%, i.e., most clients have deposits under USD 10,000 and, in case a bank has to be liquidated, these clients will be able to receive their money, since Article 167 (Order of Precedence) of the Banking Law establishes the following: ***"Except when covered by provisions contained in other articles of this Decree Law, the obligations of the bank will be paid in the following order of precedence during the liquidation:***

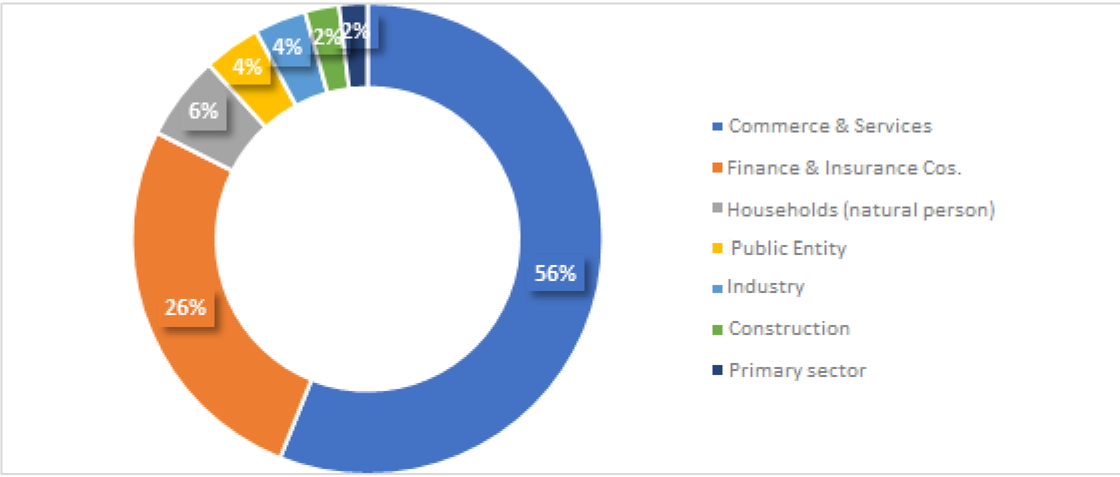
- *Deposits for ten thousand balboas or less. If there were two or more deposits in this category belonging to the same person, only the largest of them shall be paid, up to the sum of ten thousand balboas. This amount may be modified by the Superintendency."*

Table X.7: Customer Deposits – (natural and legal persons)
December 2022

Deposit range	Balance in millions of USD	No. of clients (In thousands)	Share (No. of clients / balance)	No. of clients (In thousands)	Share (No. of accounts / balance)
Less than USD 10,000	2,538	4,053	93.4%	5,134	93.9%
USD 10,000 – USD 20,000	1,558	103	2.4%	110	2.0%
USD 20,000 – USD 50,000	3,279	91	2.1%	102	1.9%
USD 50,000 – USD 100,000	3,942	45	1.0%	54	1.0%
USD 100,000 – USD 500,000	11,477	39	0.9%	52	1.0%
Greater than USD 500,000	24,131	9	0.2%	14	0.3%
Total	**46,924**	**4,339**	**100.0%**	**5,465**	**100.0%**

As for the origin of funds from customer deposits, 56% comes from commercial and services activities, this is adjusted to the fact that Panama is a country of service and, therefore, savers are engaged in providing some services, such freelance services, administrative, legal, accounting, advertising activities, among others. The next source of funding is the financial and insurance companies' activities with 26%. Fund managers, among others, are included in this economic category.

Graph X.4: Origin of funds by activity
December 2022



2. Securities concentration risk

Regarding investment concentration, it can be mentioned that the 10 largest banks based on total assets represent 75% of total banking system securities; bonds being the ones that represent the greatest share with 58.5%, while government securities account for 35.4%. On the other hand, bonds issued by Panama represent 40%, followed by U.S. bonds, 30%.

However, securities concentration risk will not be discussed in greater detail as market risk is further explained in the Market Stress section.

XI. Liquidity Coverage and Stress Tests

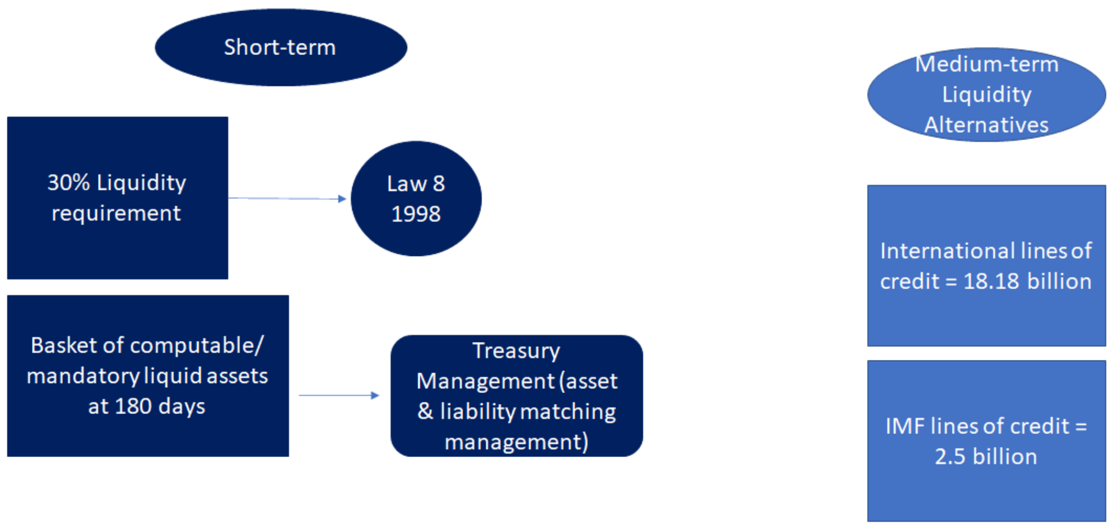
As of the end of 2022, the Banking System liquidity reached 57.18%, which exceeds the regulatory minimums in the matter. Currently, all local banks are in a well-heeled position in relation to the regulatory requirements, which would allow them to face market volatility. SBN banks have historically had robust liquidity buffers and constant access to structural and wholesale deposits, which are a fundamental part of their funding.

Regarding liquidity to date, although there has been a certain decrease in indicators compared to the levels reached in 2021, the financial system maintains appropriate liquidity indicators at the aggregate level, with sufficient resources to meet its short-term liquidity needs and, in turn, will allow it to continue with credit growth. According to the forecasts made in previous reports, it was expected that to the extent that the economic performance will recover, and therefore the credit portfolio will be energized, bank liquidity will reduce, but to levels that are still considered healthy compared to environmental risks. The decrease recorded are to a large extent the reflection of greater granting of credit.

Liquidity positions are also measured by the short-term liquidity coverage ratio (LCR), which measures the ability to face 30-day cash outflows with quality instruments, as well as the availability of demand deposits. The performance of said indicator has been positive, being greater than 100% (as required by the standard).

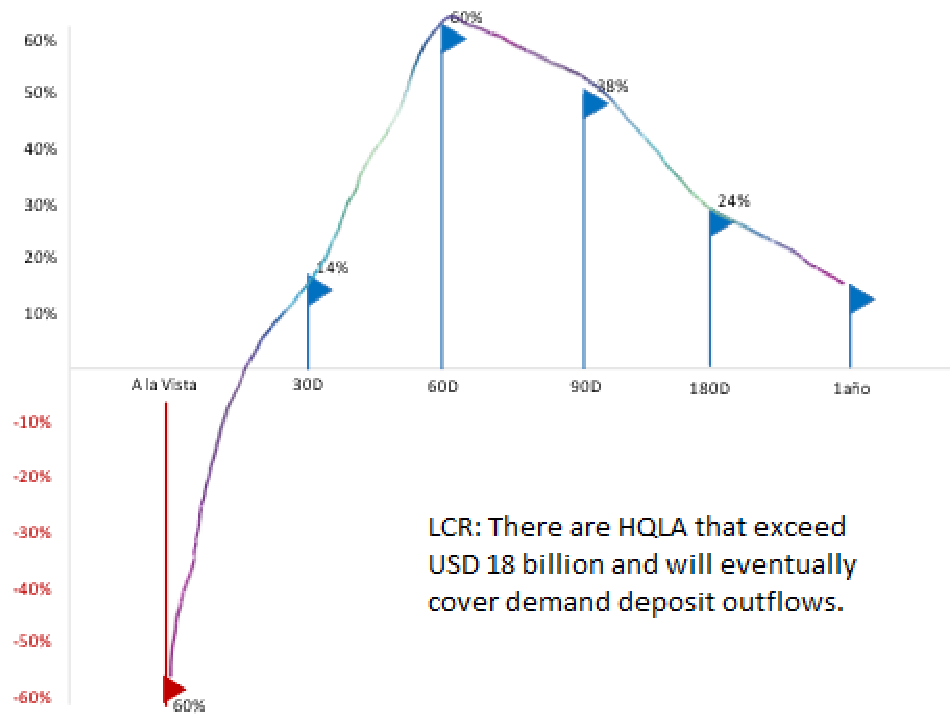
Similarly, when maturities are broken down and the matching exercises are carried out, although the gap is observed in demand operations, from the first month onwards the mismatch gap is closed, which has been a historical trend in the SBN and has been prudently managed.

Graph XI.1: SBN Liquidity Position

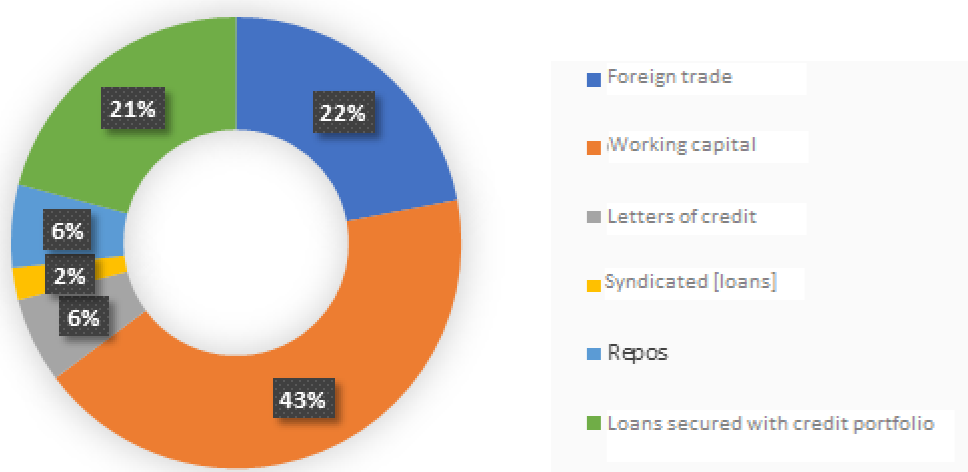


After 30 days, the asset and liability positions show a positive gap where there is a greater availability of resources to meet maturities ranging from 30 days to one year.

Graph XI.2: Liquidity Gap Analysis
Match Gap



Graph XI.3: Lines of Credit
December 2022

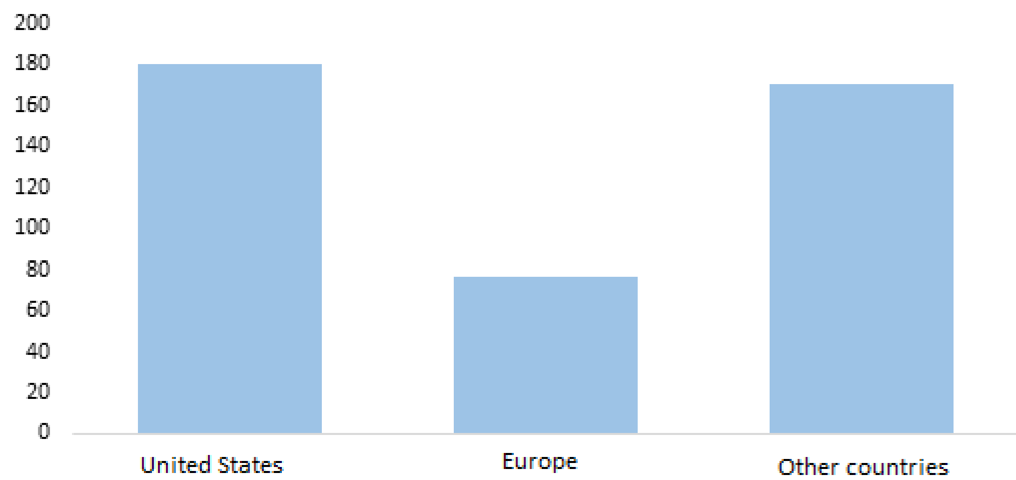


Source: General License Banks

The access of banking entities to lines of credit abroad exceeds USD 18 billion, where a large part of the contracts is aimed at using resources as working capital, followed by foreign trade operations.

It is important for each entity to have sources of financing abroad to face contingencies and that, if they occur, they could be addressed appropriately.

Graph XI.4: Number of correspondent banking relationships
December 2022



Another important aspect to consider in a country without a central bank and which is currently listed as a non-cooperative jurisdiction is having stable funding sources, as well as having sufficient correspondent banking relationships that allow the country to uphold appropriate resource bases to maintain ongoing operations.

The objective of the liquidity coverage ratio is to promote short-term resistance (30 days) against possible liquidity disturbances. To do this, banks must have available, liquid, and high-quality assets to offset net cash outflows that could occur under short-term stress scenarios.

While the purpose of the net stable funding ratio (NSFR) is for banks to maintain a minimum of stable funding sources in accordance with the asset liquidity profile and possible contingent liquidity needs for off-balance sheet operations, for a one-year-old temporary horizon.

The stress test conducted is aimed at identifying whether the banks have sufficient cash flows from loans, securities, and the sale of high-quality liquid assets to face significant deposit outflows at different terms.

For this purpose, “run off” and “run on” rates are considered as well as “haircuts” to the value of liquid assets that the deposit outflow scenario will face.

The test is conducted considering the relevant liabilities (both wholesale and retail) and their maturity structure. Likewise, inflows from term deposits in banks, loans, securities (with short- and medium-term maturities), and lines of credit are included.

The maximum horizon considered is 2 years, distributed in the following tranches: up to 1 day; up to 1 week; up to 1, 3, and 6 months; and up to 1 and 2 years.

The assumptions of run off, run on, sale percentages, and haircuts are as follows:

Table XI.1: Inflow and outflow assumptions
December 2022

	Up to 1 day	From 1 day up to 1 week	From 1 week up to 1 month	From 1 month up to 3 months	From 3 months up to 6 months	From 6 months up to 1 year	From 1 year up to 2 years
Run off rate	20%	20%	20%	20%	20%	20%	20%
Run on rate	50%	50%	50%	30%	30%	10%	10%
Assets sale %	20%	40%	60%	80%	80%	80%	80%

Table XI.2: Haircut percentages
December 2022

Assets	Haircut %
Level 1	0%
Level 2A	15%
Level 2B	50%

The results of the test show a net financing deficit as a percentage of total liabilities for the first day and terms greater than 6 months. However, once the sale of high-quality liquid assets (including the percentage of sale and haircut assumptions) is considered, the net financing value as a percentage of total liabilities is positive for each of the time tranches included in the year.

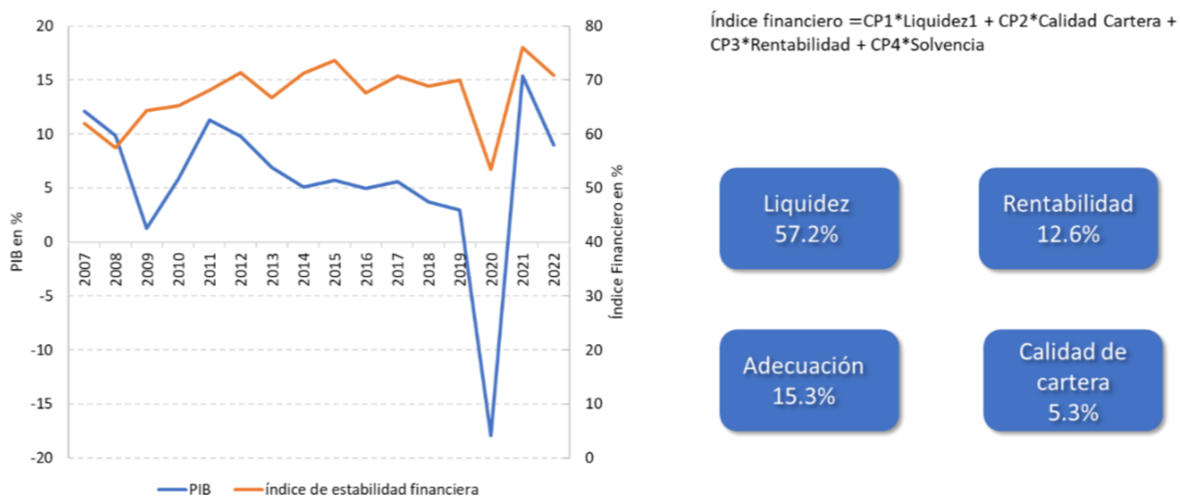
These results are consistent with and complement the liquidity gap analysis included herein.

Table XI.3: Ratio / Maturity gaps
December 2022

Ratio / Maturity Gaps	Up to 1 day	From 1 day up to 1 week	From 1 week up to 1 month	From 1 month up to 3 months	From 3 months up to 6 months	From 6 months up to 1 year	From 1 year up to 2 years
Net financing deficit in percentages of total liabilities (after using HQLA)	**0.3%**	**6.8%**	**13.5%**	**20.6%**	**23.4%**	**20.4%**	**21.7%**

XII. Financial Stability Indicators

Graph XII.1: Financial Stability Indicators
December 2022



Datos proyectados para el PIB 2022

To measure the resistance of the banking system, a financial stability indicator was developed with information on liquidity, profitability, portfolio quality, and capital, using the statistical methodology known as Principal Component Analysis (PCA). The result obtained shows that despite the indicator contracted, when in a crisis, it recovered quickly, showing the ability of banks to adapt to different macroeconomic factors and demonstrating the level of resilience of banks to manage risks, maintaining appropriate financial soundness levels, and contributing significantly to CBI's financial stability.

XIII. Capital Buffers and Credit Stress Tests

The Basel international standards are intended not only for the risk exposures of bank assets to be backed by quality capital but also that banks accumulate adequate capital buffers that allow them to face stressed periods. In this regard, countercyclical, conservation, and systemic buffers are included.

The main objective of the countercyclical buffer is to protect banks from the effects of financial cycles. The purpose is to increase capital in expansive periods, in which risks accumulate in the balance sheet, and to be able to release it in bearish phases and to absorb losses. The Credit Gap / GDP indicator is relevant when establishing the activation and deactivation rule for this buffer.

Considering the international activity of our banking center, for reference to December 2022, 32% of loans take effect in jurisdictions other than Panama.

In 2013, through Rule 4-2013, the Dynamic Provision was established, whose objective is to provide a buffer in the boom phase of the financial cycle, to be used at a time when losses increase, due to economic circumstances. This buffer is calculated based on the amount of risk-weighted assets (RWA) of each entity, the growth of said assets, and the variation of the specific provisions in the quarterly calculation period of the provisions. Provisions are established from Retained Earnings that are part of Common Tier 1 Capital.

The conservation buffer is intended to ensure that banks have an additional capital buffer that can be reduced when losses are incurred. This buffer is set at 2.5% of RWA and is made up from the Common Tier 1 Capital. Currently, the Superintendency of Banks of Panama is conducting the corresponding surveys to assess the implementation and graduality of its constitution.

Capital buffers are established to be able to be used in stress scenarios. In this regard, the Superintendency of Banks of Panama has set a macroprudential stress test that is aimed at assessing the impact of domestic or foreign macroeconomic shocks on the stability of the banking system, in addition to identifying structural vulnerabilities and global risk exposures in the system.

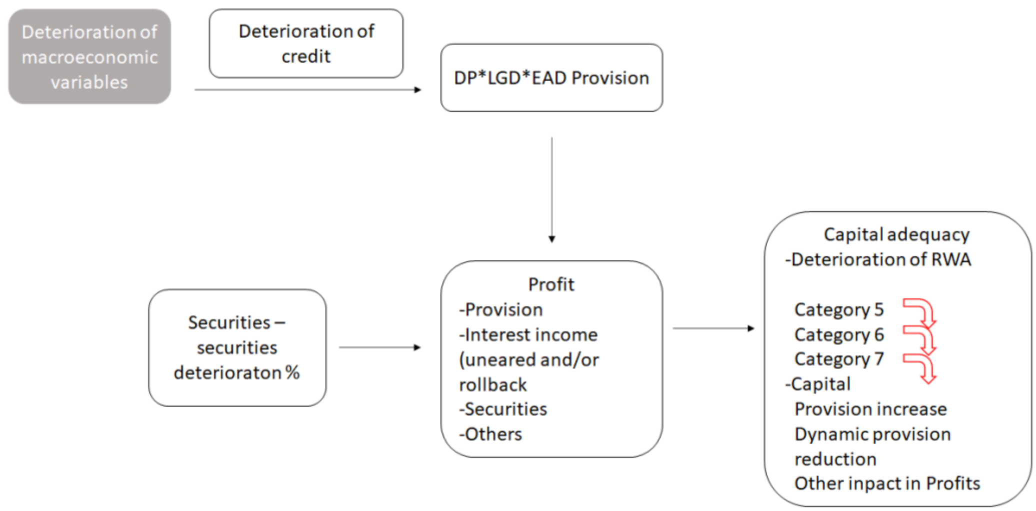
This test considers not only systemic banks but all general license banks. The results obtained are based on extreme scenarios with a low probability of occurrence.

The assessment allows us to project the credit portfolio and its provision for a 3-year period (quarterly results), considering the deterioration of macroeconomic variables, such as GDP and unemployment.

Models have been developed to calculate credit deterioration for the 9 main activities (commerce, services, industry, construction, primary sector, mortgages, car loan, personal loan, and credit card), in addition to considering the bank size. The banks have been grouped into large banks, medium banks, small banks, and retail banks.

As a result of this test, net profit/losses are obtained, which are added to capital and, using (projected) risk-weighted assets, the capital adequacy ratio is calculated. This test is carried out for base, moderate stressed, and severe stressed scenarios.

Graph XIII.1: Credit Stress Testing
December 2022



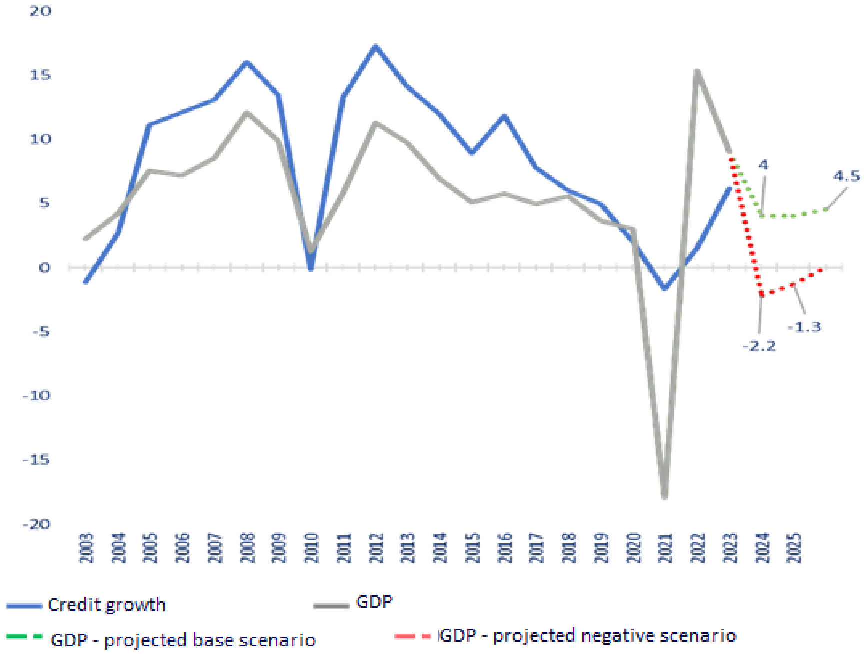
The estimated provision is calculated based on the Expected loss, for which the parameters of default probability, default losses and exposure must be calculated.

Expected loss = Default probability * Default loss * Exposure

Default probability is the probability that, given a risk profile, a transaction turns into default in pre-defined period. For this, the default probability was calculated for the transactions of each of the 9 main activities. The default loss refers to the estimated loss that a transaction defaulted. For the calculation, the value of collateral adjusted for the time value of money and the uncertainty about the cash realization value were considered.

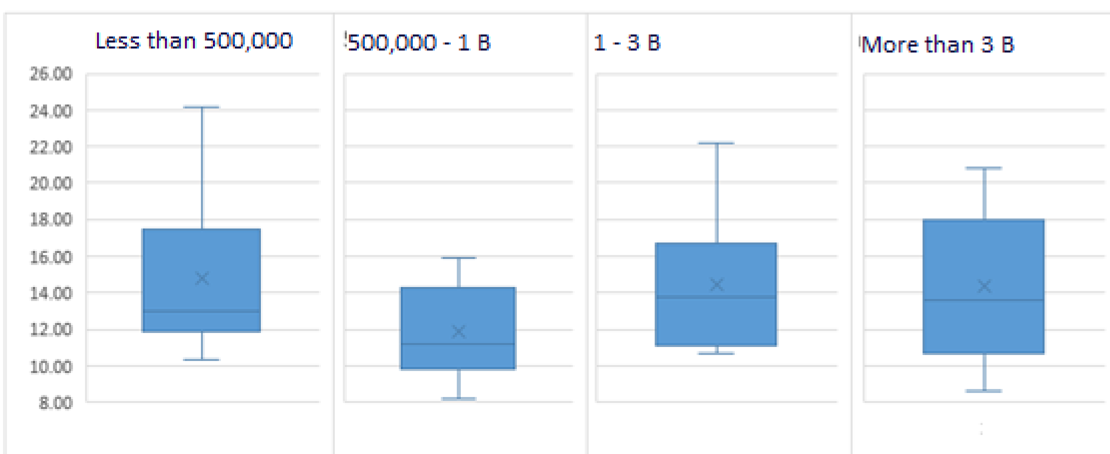
Exposures from credit operations include balance, interest receivable, and undrawn loan obligations (adjusted by a credit conversion factor). For the credit stress test corresponding to the figures for the end of 2022, a GDP growth of -2.2% for 2023 and -1.3% for 2024 was used as a negative scenario.

Graph XIII.2: Stress Scenario (GDP projection)
Years 2003 - 2025



As of December 2022, the SBN capital adequacy was 15.34%. The projected data, under this negative scenario, indicated a stressed solvency ratio of 14% and 14.7%. Below are the results for the year broken down by bank size, based on total assets. In all series, these stressed results would be well above the regulatory 8% of the ratio that includes the countercyclical provision or dynamic provision.

Graph XIII.3: Capital adequacy by asset size (moderate stress)
December 2022



XIV. Market Stress

As part of the macroprudential monitoring tools, the Superintendency has market risk stress tests, which are very relevant in the current international rate hikes scenario.

There is a model that allows evaluating the impact of interest rate hikes on fixed-income securities classified as instruments at fair value through profit or loss and instruments at fair value through other comprehensive income.

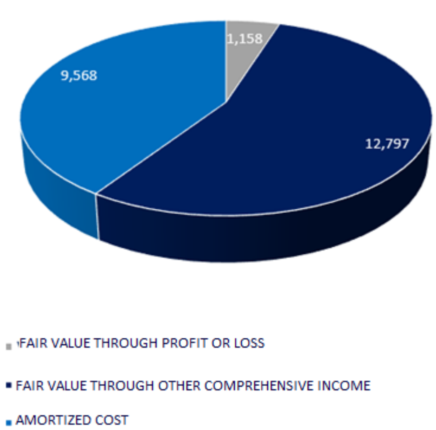
Therefore, we are using the Modified Duration (MD) as a simplified method to find the new price of fixed-income securities in scenarios that consider a variation in market interest rates. The modified duration is a measure of the price sensitivity of a fixed income security and presents the price elasticity to interest rate changes.

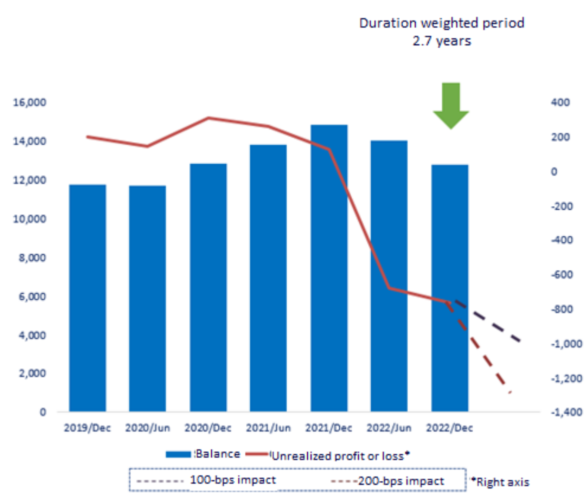
As of December 2022, the main component of the investment portfolio is securities at fair value with exchange in other comprehensive income amounting to USD 12.80 billion and corresponding to 54% of total portfolio.

Of these securities, USD 12.70 billion are fixed-income securities with an average duration of 2.7 years and accumulating an unrealized loss of USD 760 million (December 2022) because of the increase in international rates.

Under a 100-bps increase scenario, the impact would be a rise in unrealized loss of USD 680 million and the accumulated unrealized loss could reach approximately USD 1.4 billion (under a 200-bps increase scenario).

Graph XIV.1: Market Stress



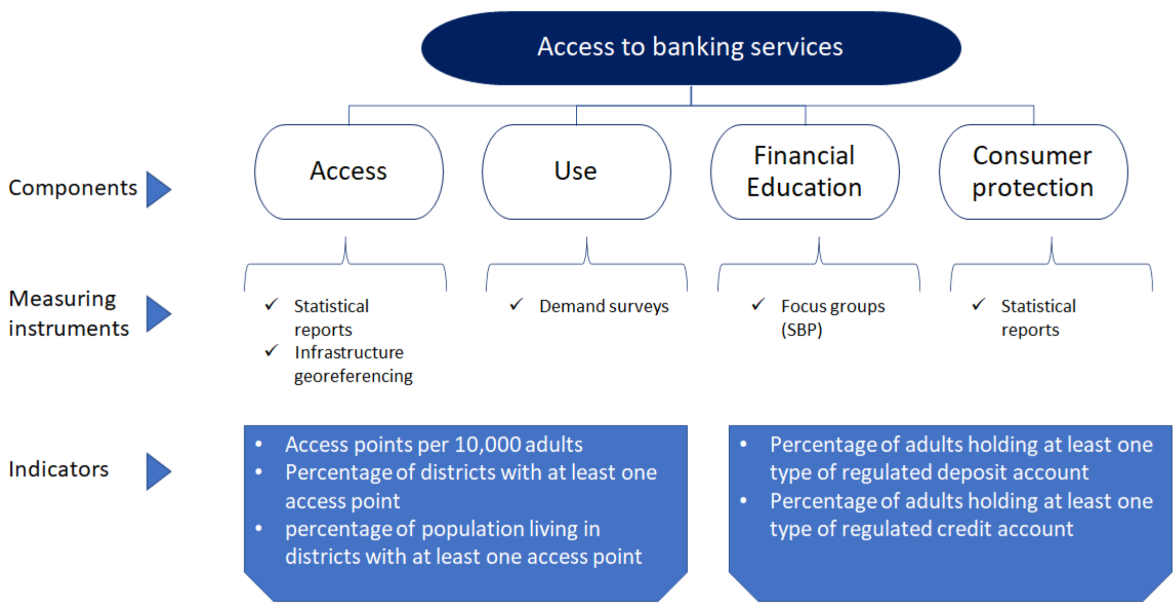


XV. Access to Banking Services

The access to banking services can be defined as the contact and use of quality banking services by all segments of the population, which facilitates the people's access to sustainable and secure financial services and contributes to increase income and reduce poverty, thus producing economic growth and financial stability. It should be noted that access to banking services and financial inclusion, although they are similar terms, do not necessarily mean the same thing. A person who is served by the formal financial system is financially included but if that person is not onboarded by a bank is underserved, i.e., he/she would not have access to banking services.

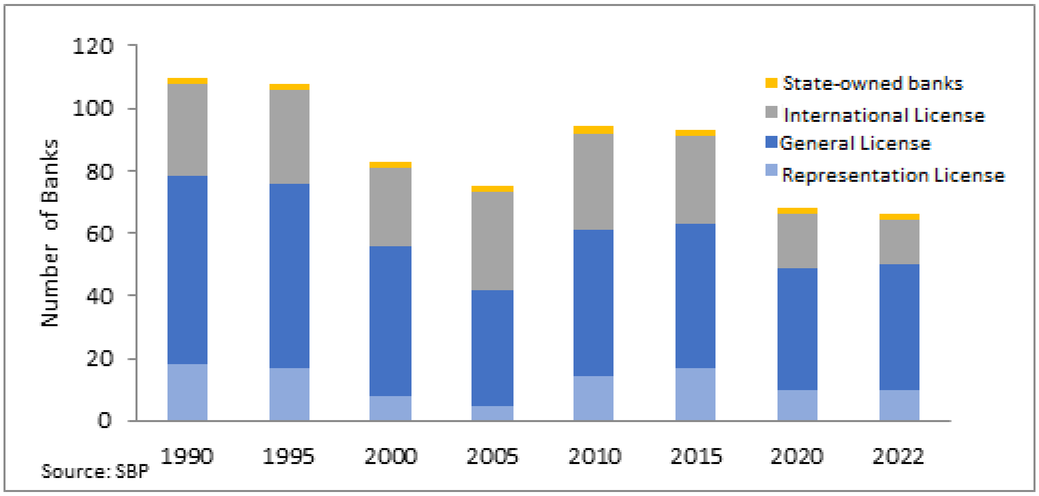
In this regard, the access to banking services and financial inclusion are an important part of the social inclusion process and in recent years they have been at the top of the political agenda of governments worldwide. In our country, the efforts to foster access to banking services and financial inclusion are not new, given that various public and private entities have implemented financial inclusion strategies, plans, guidelines, and programs. The process to measure access to banking services consists of four segments: access, use, and its main components, i.e., financial education and consumer protection.

Graph XV.1: Access to banking – Process to measure access to banking



The financial system has undergone a profound transformation in recent decades, which has been reflected in a continuous process of mergers, takeovers, and acquisitions of shareholdings of local entities. The first-rate banks absorbed smaller entities, and, in this way, they managed to expand their businesses and triggered a trend towards concentration. Of the 108 financial institutions that existed in 1997, the CBI currently consists of 66 banks, divided into 2 state-owned banks, 40 general license banks, 14 international license banks, and 10 representative offices (see **Graph XV.2**).

Graph XV.2: Banks by type of license
1990-2022



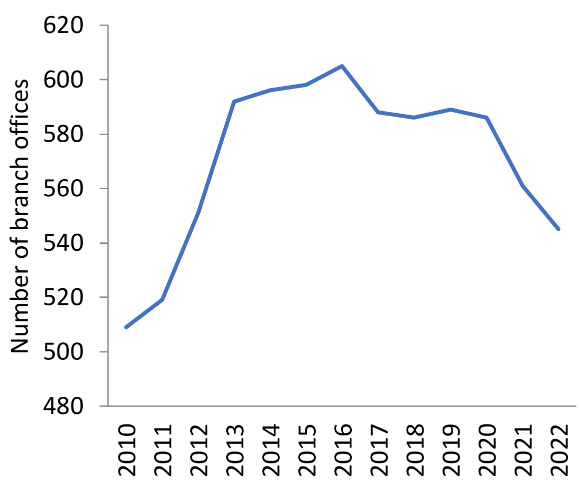
It should be noted that the banking system has had a greater presence of regional banks, which has been accompanied by greater development in the local part, which has allowed a higher level of financial deepening in the country, not only in terms of credit but also in terms of deposits.

Understanding that the gap between the need and the possibility of accessing the financial system can be explained in part by the lack of infrastructure, Panama has made notable progress in the last decade. In terms of access to banking services, we can mention that the number of locations with access points to banking services reached an all-time high in 2022. However, this occurred with nuances where a decrease in the number of brick-and-mortar branch offices and other establishments is observed (something that began before the pandemic) but with the increasing use of ATMs and digital channels that gained ground with the pandemic this phenomenon is part of a global trend observed in countries with different income levels that record a progressive reduction of their brick-and-mortar branch offices because of the growth of digital financial services and the financial entities' strategy to boost efficiency and reduce costs.

Although clients have migrated rapidly to digital services since 2020, ATMs usage has increased in 2021 and into 2022. Electronic transactions at banks continue to grow and ATMs have played a role to decongesting branch offices and digitalizing operations. In this way, the incorporation of new automated teller machines is part of the digitalization strategies, streamlining services, and unifying customer attention through various channels.

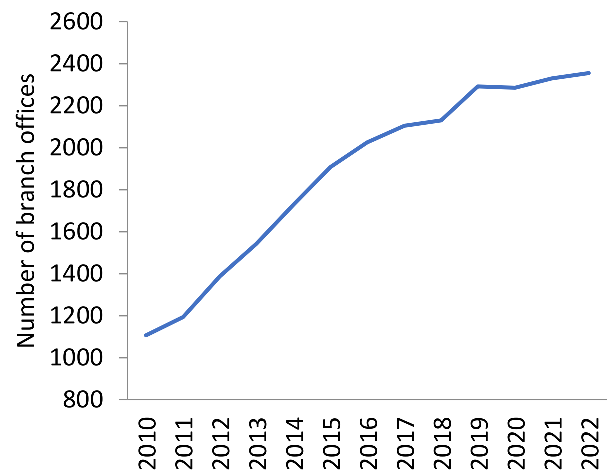
As of the end of October 2022, Panama has 545 brick-and-mortar bank branch offices. On the other hand, the number of automated teller machines has increased steadily in recent years and, according to the latest data available reported to the SBP, the market has 2355 ATMs. The decrease of brick-and-mortar branch offices is because many of them have been replaced by digital channels that have disruptively entered the local market. In the last four years, a total of 487 new electronic channel applications have been submitted, where the largest proportion of these channels is linked to mobile banking and internet banking to offer products such as opening a savings account and having a mobile or digital wallet, among others.

Graph XV.3: Branch offices
2010 - 2022



Source: SBP

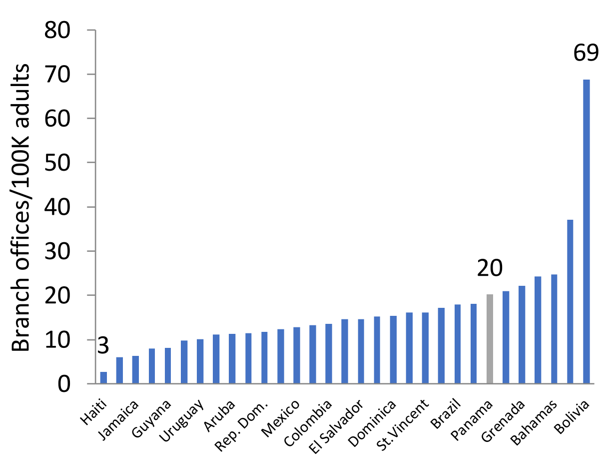
Graph XV.4: ATMs
2010 - 2022



Source: SBP

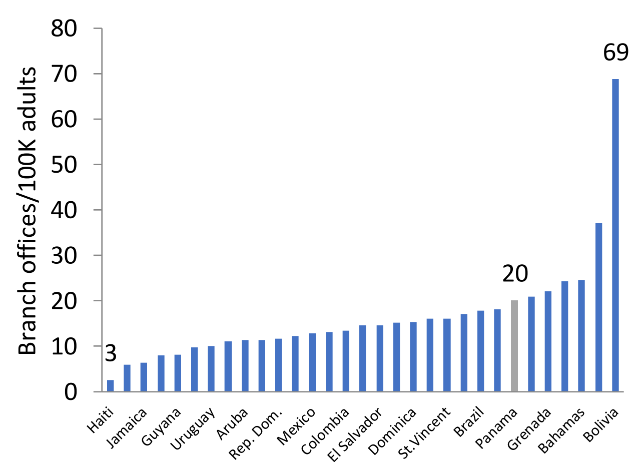
This phenomenon is part of a global trend observed in countries with different income levels that record a progressive reduction of their brick-and-mortar branch offices because of the growth of digital financial services and the financial entities' strategy to boost efficiency and reduce costs.

Graph XV.5: Branch offices per 100,000 adults
2020 (last data available)



Source: World Bank

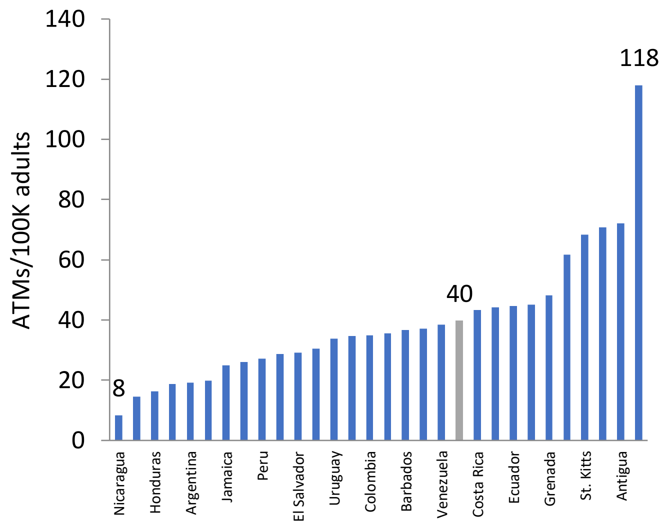
Graph XV.6: Branch offices per 100,000 adults
2020 (last data available)



Source: World Bank

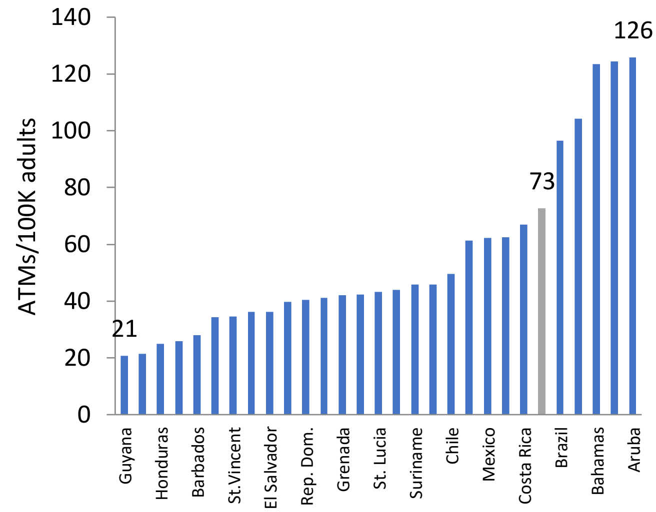
Although clients migrated rapidly to digital services since 2020, ATMs increased their service during 2021 and 2022. Electronic transactions at banks continue to grow and ATMs have played a role in decongesting brick-and-mortar branch offices and digitalizing operations. In this way, the incorporation of new automated teller machines is part of the digitalization strategies, streamlining services, and unifying customer attention through various channels.

Graph XV.7: ATMs per 100,000 adults
2010 (last data available)



Source: World Bank

Graph XV.8: ATMs per 100,000 adults
2020 (last data available)



Source: World Bank

These factors became especially relevant in the context of the COVID-19 pandemic, when digital financial services contributed to reduce people circulation to minimize the risk of spreading the disease, while the drop of economic activity affected the financial sector's profitability.

To serve the underserved people, the role of the nonbanking correspondent was established. A nonbanking correspondent is a third party that enters relations or business ties with a bank to offer the bank's financial services on its behalf and representation to its clients. One of the duties of these correspondents is to "replace" a brick-and-mortar bank branch office in places where it is not profitable to have one. In other words, when there are third parties interested in offering financial services in small communities, but it is not profitable to have brick-and-mortar branch offices in those places, the role of the nonbanking correspondent can act as a link between demand and supply. That is why the nonbanking correspondent plays a significant role in terms of financial inclusion. In Panama, although there are companies that perform some intermediation functions for certain banking transactions (various service payments), they do not perform the main transactions that would be required from a correspondent (cash deposit and withdrawal), which consequently do not cause greater financial inclusion in this way.

Appendix XV.1 Recent increase in deposit accounts and financial inclusion

In recent years, Panama has recorded an improvement in the World Bank's financial inclusion survey on the number of adults holding a bank account or an account with another regulated entity. This is the main indicator to calculate financial inclusion. One of the major evaluations made globally is through the World Bank's Global Findex, which covers the ways in which adults around the world use financial services. The results of the first survey were published in 2011.

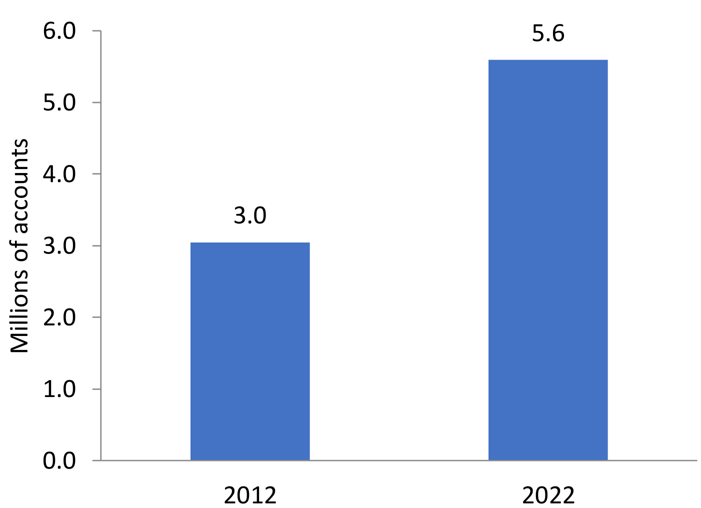
In 2011, it was found that 24.9% of adults in Panama held a bank account or an account with another regulated entity, a percentage that grew to 43.7%, in 2014, and to 46.5%, in 2017. However, in the most recent survey this percentage fell short, reducing to 44.9% in 2021, placing the country below Brazil and Venezuela (both at 84%), Argentina (72%), Bolivia (69%), Costa Rica (68%), Ecuador (64%), Colombia (60%), and Peru (57.5%). This result would suggest that the opening of new accounts would have substantially reduced, something that does not match the data available on natural persons' deposit accounts.

It should be remarked that the methodology is based on self-reports conducted in each country, not on hard statistics on the number of existing accounts.

Recent performance of natural persons' deposit accounts

In terms of financial inclusion, as of December 2022, the number of deposit accounts stood at 5.3 million contracts, which represented an almost 85% growth in a decade. It should be noted that this growth was significantly accentuated during the lockdown and mobility restrictions imposed because of the COVID-19 pandemic.

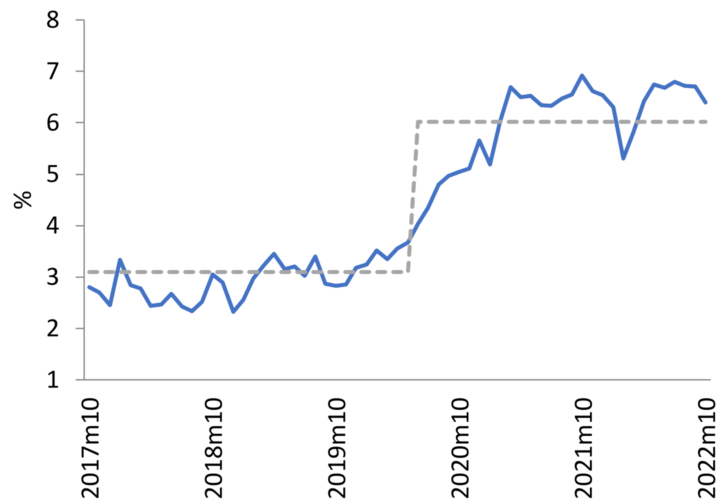
Graph XV.9: Natural persons' deposit accounts
2012 vs 2022



Source: SBP with General License Banks data

In fact, a record opening of new bank accounts occurred in the second quarter of 2020 while the first stage of the coronavirus pandemic. Although the ordinary growth of new accounts was almost 3%; after the onset of the pandemic, the increase of natural persons' account has been around 7%, more than double the recorded before this health crisis. An important element in this performance was the payment of pensioners, retirees, and beneficiaries of government subsidies, of which a significant part was underserved and since March 2020 hold an account to receive payments.

Graph XV.10: Growth of natural persons accounts
October 2017 - October 2022



Source: SBP with General License Banks data

This process was a step to serve these groups, so that they did not have inconveniences and that the face-to-face collection of pensions was not an additional risk factor for them. Likewise, the inclusion of digital payments to those who receive conditional transfers was provided. The access to banking services process will continue to be unfolded so that people, especially those who have special needs, do not have to go to brick-and-mortar branch offices or payment points established by financial entities. Although these changes would explain a temporary increase, the growth of accounts has been maintained since the pandemic managed to expand digital payments, virtual banking service channels, and the opening of accounts.

Is there a change in the trend in opening new accounts?

To analyze whether there is a structural change in the rate of opening new natural person's accounts, an econometric model was estimated, which includes the characteristics of a time series, considering that the variables are explained by their own lags. In this regard, an Autoregressive Model (AR) of ARD (1,1) type was initially used. The model can be represented as follows:

$$y_t = \beta_0 + \beta_1 \, y_{t-1} + \gamma_0 \, D_t(\tau) + \gamma_1 \, D_t(\tau) * y_{t-1} + \varepsilon_t$$

Where $D_t(\tau) = 1$ if $t \geq \tau$, and 0 in any other case

Where y_t is the growth rate of deposit account openings, β_0 is the constant, and D is a vector of dummy variables, and ε_t is the residual. We test the null hypothesis with a Chow test (F test with robust errors):

$$H_0 = \gamma_0 + \gamma_1 = 0$$

If we do not reject H_0, then there would be no evidence that the regression quotients have changed in τ. If at least one is nonzero, then the break is likely. For our case, we used March 2020 as cut-off date. Once a parsimonious explanatory model of the new bank account openings has been obtained, we proceeded to determine if there is a structural change in the behavior of said series. For this, a Chow test was conducted. The latter analyzes whether the relation between the different variables included in the model remains constant between two periods, i.e., it seeks to determine if both periods can be explained by the same model since the estimated quotients are the same. It should be noted that the Chow test considers that the point in time at which the structural change occurs is known. The result of the Chow test indicates the existence of a structural change in March 2020.

chi2(2)	=	15.9956
Prob > chi2	=	0.0003

This result implies that autoregressive estimates quotients are statistically different before and after the dates on which a structural change was identified. In this context, the average demand deposit between March 2020 and October 2022 showed an increase of almost an additional 3% compared to the average for the period between October 2017 and February 2020, as suggested by Graph R.2. This increase can also be seen in the performance of digital accounts, where it can be observed that, in the last four years, between 2019 and 2022, the number of electronic banking transactions increased 62%. In 2019, USD 987 million of banking operations were conducted through the internet, mobile banking, ATM transactions, and points of sale payments, among others. By 2022, this figure surpassed USD 1.60 billion of operational transactions.

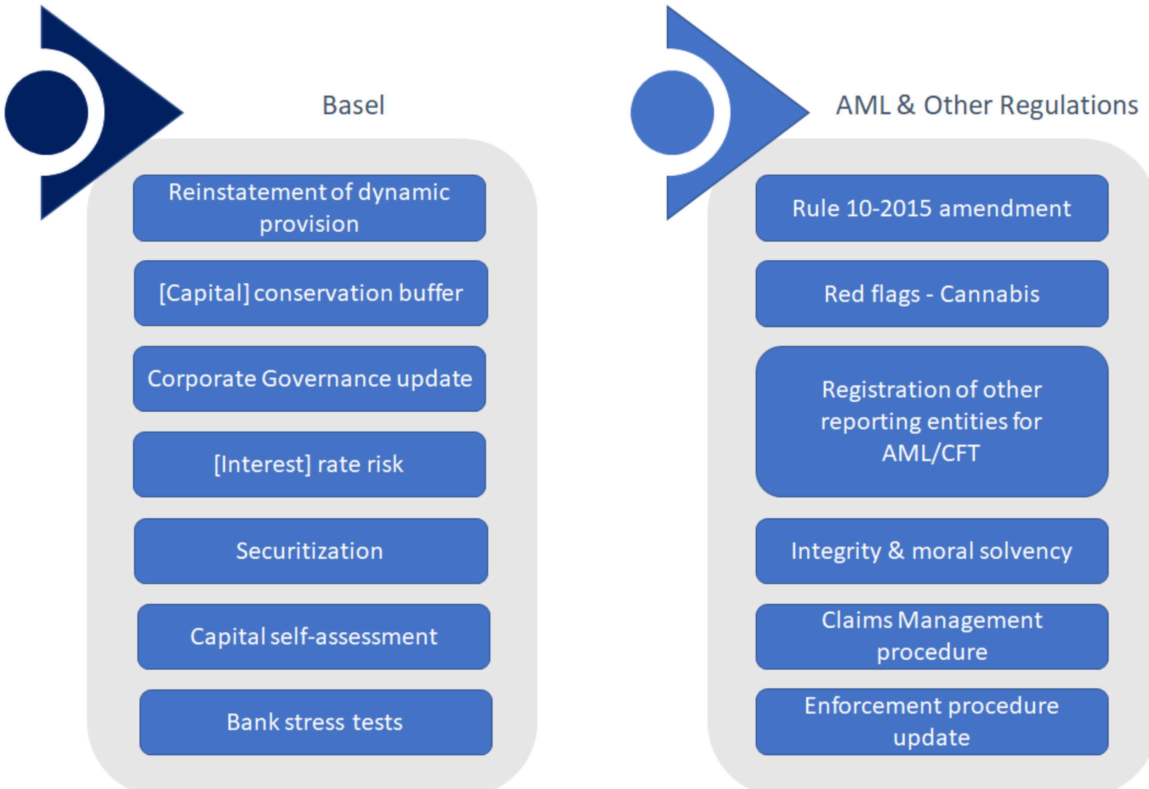
Considerations

Since the onset of the COVID-19 pandemic, there have been certain effects on people's savings decisions that led them to open new deposit accounts. We believe that this phenomenon has been more intense in people who did not previously have an account and today manage them either for regulatory reasons or for digital transactions. In particular, the production of new accounts shows signs of changes in its trajectory. The econometric analysis conducted in this section corroborates the existence of a structural change in this regard. In this context, the data shows that there have been improvements in holding and producing new accounts, which will require a comparison of the current data and not only of self-reports. A precise analysis of the foregoing will require information from other nonbanking financial entities.

XVI. 2023 – 2024 Regulatory Roadmap

The regulatory roadmap that will be addressed during 2023 and 2024 on issues related to Basel is as follows:

Figure XVI.1: Regulatory roadmap



- **Rule on the reinstatement of the Dynamic Provision:** Since 2020 the dynamic provision was suspended and its use was allowed, for which reason the technical divisions of the SBP are currently conducting the relevant analysis to issue a rule by means of which the calculation of the dynamic provision will be reactivated and the new provisions for its reinstatement will be established, which will be duly consulted with the Panama Banking Association working groups.
- **Rule on [capital] conservation buffer:** According to the guidelines established by the Basel Committee on Banking Supervision, a regulatory framework will be adopted to establish the parameters for the constitution and management of a capital conservation buffer whose objective will be to reinforce regulatory capital to provide greater coverage for banks' risk exposure, which allows preserving common capital during stressed scenarios and, consequently, reinforces the soundness of the banking system.
- **Corporate Governance (regulatory framework update):** Although we currently have a robust regulatory framework in terms of Corporate Governance, which was even praised by the International Monetary Fund evaluators during their recent visit to Panama, we believe that

there is still an opportunity to make some regulatory adjustments that strengthen the current regulatory framework, based on the latest paper issued by the Basel Committee on Banking Supervision entitled "Guidelines: Corporate Governance Principles for Banks" (July 2015). In this regard, the responsibilities, competences, composition, structure, and practices of the Board of Directors; the roles of the independent director; the duties of the Risk Management, Compliance, and Internal Audit Units; disclosure; and transparency will be evaluated considering the latest document issued by Basel to make the corresponding adjustments.

<u>In terms of anti-money laundering and the development of the Banking Law, we have considered the following:</u>

- **Amendment of Rule No. 10-2015 on Anti-money laundering:** As a result of the discussions held with the Panama Banking Association's Compliance Officers Committee, where we have had feedback meetings between both entities, it has been included in our regulatory roadmap the amendment of some stipulations of the Rule on the prevention of the misuse of banking and trust services. Additionally, it is necessary to review the current framework because of the issuance of Executive Decree No. 35 dated 6 September 2022, by means of which Law 23 of 2015 is regulated (this law, as everyone knows, was amended in 2022) to make the necessary adjustments to Rule No. 10-2015.
- **Red flags catalog – on Cannabis:** Another rule included in the regulatory roadmap for 2023 is the modification to Rule No. 7-2015 on the red flags catalog to include new red flags related to clients involved in the sale of cannabis for therapeutic and medicinal use, an activity regulated through Law No. 242 dated 13 October 2021, which establishes that the SBP is required to develop mandatory regulations to facilitate the activities authorized by said law. The red flags that will be contained in the rule are based on the document issued by FinCEN, which includes an explanatory guide for financial institutions on how to provide financial services to companies related to the cannabis business.
- **Rule on Integrity and Moral Solvency of shareholders and members of the board of directors of banks:** This rule seeks to reiterate and ratify one of the main criteria used when granting a banking license. Article 48 of the Banking Law establishes among the criteria for the approval or denial of a banking license the identity of the main shareholders and suitability of the administrative staff based on their experience, integrity, and professional background. We believe that that moral solvency and integrity of shareholders and members of the board of directors of a bank – that are verified when approving a license – must always be maintained, for which reason the rule draft will include aspects that must be addressed within the banks' internal policies, to strengthen the transparency of the system and to ensure compliance with the principles the Basel Committee on Banking Supervision has issued on the matter.
- **Claims management procedure with the SBP (regulatory framework update):** We have considered updating the regulatory framework that establishes the claims management procedure to be faster, efficient, and expeditious, which will be of great benefit for bank consumers who file their claims with the SBP, since they will be able to obtain a decision more quickly, considering that the procedure will be streamlined.

XVII. Final Considerations

The financial economic performance of the Republic of Panama, in 2022, can be said to be very positive, if we see it from the perspective that the country suffered the most from the ravages of the pandemic in 2020.

The economic recovery contributed significantly to the banking sector stabilizing delinquency rates again, resulting in the banking sector not reducing its profitability thanks to the incorporation of credit correction accounts, because of provisions, to face the unhealthy portfolio. Given the increase of interest rates and other external risks, some deterioration in the portfolio quality indicator for 2023 is expected, due to a less favorable operating environment and consumer loans maturity. Provisioning for impaired loans reached 123%.

A considerable portion of new loans also contributed to the development of new projects within the productive sector, as they also supported, to some extent, households to be able to agree with the banking industry, a profile of their credit contracts, which will help them bear the financial burden weighing households' income capacity.

A complicated juncture of international macro financial threats has produced tensions in economic policies in most countries and how the oil market performs will be crucial. In this regard, as for the Panamanian case, it can put pressure on the consumer basket and increase the consumer price index, and thereby intensify inflation in Panama. Although there has been a sustainable performance of prices in Panama in recent months.

As mentioned in previous financial stability reports, it will be essential not to deteriorate reputational risk, which involves factors that can affect the image and confidence in our country and the economy. The listing as a non-cooperative jurisdiction and the actuarial deficit of the Social Security Fund & Administration are factors that could affect macroeconomic indicators, which in turn can become vulnerabilities in the medium-term, impacting the cost of funding through higher risk premiums.

The banking sector evolved positively at the rate of the 2022 economic performance, after difficult periods because of the pandemic. Although, under a complicated economic environment, marked by problems in the global supply chains, high levels of inflation, strong monetary policy rate hikes by central banks, both in advanced and emerging economies, Panama closed 2022 with a positive expansion.

As of the end of 2022, the banking sector maintains appropriate capital and liquidity ratios and continues to show a system with stable financial fundamentals. During this year, the sustained growth of the credit portfolio has allowed an improvement in profitability, while a reduction in the risky portfolio is observed. Similarly, it highlights that funding levels are stable and liquidity levels easily meet the regulatory standards. In compliance with Rule No. 12-2022, the provisions regarding the modified loans were terminated on 31 December 2022, by providing the guidelines and parameters for the permanent reinstatement of the "Modified Special Mention" loans portfolio category, as provided by Rule No. 4-2003.

In 2022, the profits of CBI banks totaled USD 1.91 billion, a figure that represents a 45.8% increase versus the same period a year earlier. With this result, banking net profit would be at levels higher than that of 2019. It should be noted that the improvement in profitability indicators took place even though, during 2022, the average annual financial margin in intermediation operations has narrowed, which would account for increases in term deposit rates, without significant increases in the lending portfolio, with which the spread has been reduced.

The International Banking Center has reached its maturity level, where after more than 50 years of operations, it has faced many international economic crises events that could have a negative effect on the good performance of the banking industry in Panama, however, the entities have been able to manage risks conservatively, which has allowed them to remain competitive. Undoubtedly, the exogenous and endogenous variables could have some effect on everything that refers to financial intermediation and, in turn, on the work of banks, which is to grant loans to the real sector, as has happened to some degree in the financial markets worldwide and from which Panama does not escape. It will be key for the CBI that its banks maintain robust soundness indicators that allow it to continue managing its portfolios despite possible financial turbulence.