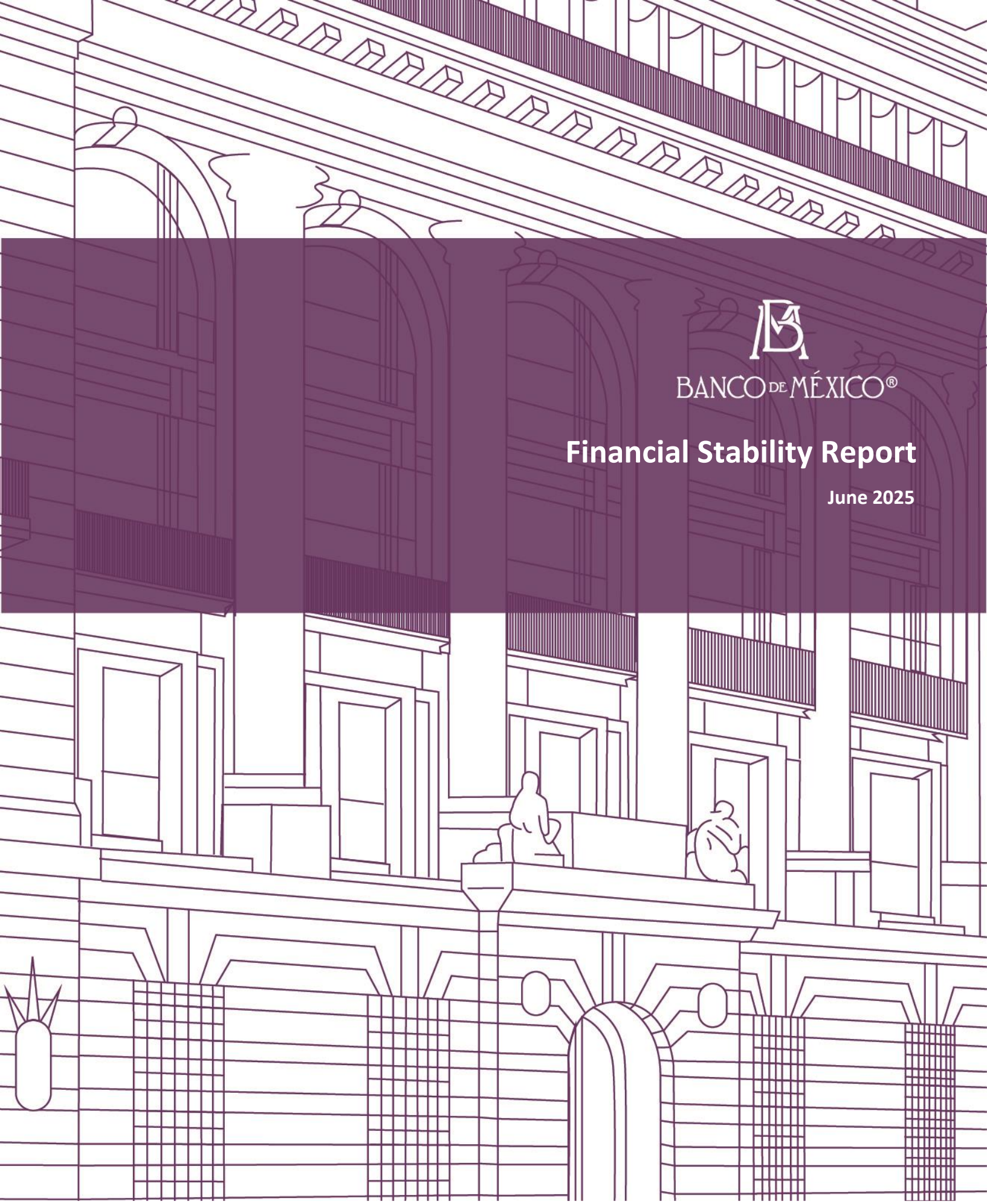


BANCO DE MÉXICO®

Financial Stability Report

June 2025

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NOTICE

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Abbreviations and acronyms that correspond to names in Spanish and references to this *Repor*t have been written in italics, whereas those that correspond to names in English appear in round print. The meanings of all abbreviations and acronyms appear at the end of the document. The term "billion" represents 1,000,000,000, while "trillion" equals 1,000,000,000,000 (a thousand billion), as commonly used in English.

CONTENTS

Executive summary *1*

Introduction *4*

I. Macro-financial conditions *5*

I.1. International economic outlook 5

I.2. Domestic economic outlook 6

I.3. Financial markets 7

I.3.1. Foreign exchange market 7

I.3.2. Fixed-income market 8

I.3.3. Equity market 9

I.3.4. Derivatives market 10

I.3.5. Risk premiums 12

I.4. Macro-financial risks 12

II. Update on challenges of the economic environment *14*

III. Policy measures implemented to preserve the sound development of the financial system *22*

IV. Risks of the financial system *24*

IV.1. Aggregate risk indicators 30

IV.2. Financial position of households, companies and public sector 39

IV.2.1. Households 43

IV.2.2. Private non-financial companies 54

IV.2.3. Public sector 63

IV.2.3.1. Federal government 63

IV.2.3.2. State-owned companies 64

IV.2.3.3. States 65

IV.2.4. Foreign sector and capital flows 67

IV.3. Institutions 69

IV.3.1. Commercial Banks 71

IV.3.2. Development banks and other financial institutions 87

IV.3.2.1. Infonavit and Fovissste 91

IV.3.3. Siefores, welfare pension fund, and investment funds 93

Siefores 93

IV.3.4. Broker-dealers 97

IV.3.5. Insurance companies and bonding institutions 98

IV.3.6. Other Non-Bank Financial Intermediaries 99

IV.3.7. Environmental risks and sustainability of investments 107

IV.4. Financial markets infrastructures 123

IV.5. Other risks to the financial system 124

IV.5.1. Operating continuity risks 124

IV.5.2. Cybersecurity Risk 124

V. Stress Tests and Recovery Plans *128*

V.1. Credit Stress Tests 133

V.2. Liquidity stress tests 137

V.3. Stress testing of physical risks associated with climate change 139

V.4. Recovery plans 140

VI. Final remarks *141*

VII. Annex *143*

List of initials and acronyms *144*

BOXES

Box 1: Social assistance and credit delinquency rates among the most vulnerable borrowers 16
Box 2: Secondary regulation applicable to simplified securities issuers 24
Box 3: Implementation of the Total Loss-Absorbing Capacity (TLAC) requirements in Mexico 27
Box 4: Trade policy uncertainty and the Financial Markets Stress Index 34
Box 5: Determinants of default in revolving consumer loans 47
Box 6: What factors determine the differences in financing conditions between women and men? 54
Box 7: Carbon markets 109
Box 8: The use of Artificial Intelligence in central banks: risks, benefits and opportunities 128

Definition of Financial Stability and scope of the Financial Stability Report

Banco de México, considering its purposes of promoting the sound development of the financial system and fostering the proper functioning of the payments system, monitors the performance of the Mexican financial system and its participants, as well as the main risks and vulnerabilities that could affect its stability and, therefore, its proper functioning.

A stable financial system is one in which financial institutions, markets and their infrastructures facilitate the exchange of funds between savers, borrowers, and investors, with adequate risk management, thus contributing to the proper functioning of the economy and achieving sustainable economic growth. Financial stability also implies that the financial system is able to withstand shocks while it also contributes to maintain an environment of macroeconomic stability and growth. An adequate functioning of the financial system also contributes to Banco de México's primary objective of ensuring price stability since it promotes a more efficient operation of monetary policy´s transmission channels.

A stable financial system is a necessary but not sufficient condition for achieving a more balanced and sustainable growth, since, as international experience confirms, periods of financial instability have a very high cost for society. Therefore, it is necessary for financial authorities to remain vigilant of developments in the financial system and its interaction with economic activity, as well as its risks, in order to avoid the accumulation of vulnerabilities that could generate systemic problems, or amplify or cause negative shocks in the economy. The analysis and monitoring carried out by Banco de México regarding the stability of the financial system is made known to the public every six months through the Financial Stability Report. The identification and monitoring of risks that could affect the stability of the financial system, as well as their timely disclosure, are essential to mitigate them and, thereby, to reduce vulnerabilities and enhance the resilience of the system.

Executive summary

The Mexican financial system has shown resilience in a global context characterized by a slowdown in economic activity, ongoing disinflation, trade tensions between the United States and its trading partners, and expectations of a less restrictive monetary policy in most countries. During the first half of 2025, international financial markets registered episodes of volatility, particularly in the currencies and stock indices of countries and regions where trade conflicts have caused greater impact.

Macro-financial conditions

International environment

Global economic activity increased during the fourth quarter of 2024 compared to the previous quarter. Nevertheless, growth is estimated to have slowed in the first quarter of 2025 given the increase in trade uncertainty following the US announcement of tariffs on several of its trading partners.

In light of the above, global growth projections for 2025 and 2026 were recently revised downwards by the International Monetary Fund.

During the fourth quarter of 2024, inflation increased in some advanced economies, while in emerging economies it showed heterogeneous behavior, reflecting the idiosyncratic factors in each country. So far in 2025, headline and core inflation have exhibited different behavior, both in advanced and emerging economies. Inflation still remains above the central banks' targets in most countries.

Domestic environment

Domestic economic activity contracted during the fourth quarter of 2024 compared to the prior quarter, and showed signs of weakness at the beginning of 2025, in a complex environment caused by increased uncertainty from trade tensions. Headline inflation slowed from 4.51% in the fourth quarter of 2024 to 3.72% in the first quarter of 2025, due to a sustained reduction in core inflation, largely attributed to monetary policy actions. In May 2025, annual headline inflation stood at 4.42%.

During the first half of 2025, the Mexican peso registered temporary bouts of volatility, associated with the uncertainty generated by changes in US trade policy. However, the Mexican peso appreciated during the period overall, reflecting the weakness of the US dollar.

Meanwhile, total financing to the Mexican economy increased in real annual terms in the first quarter of 2025, representing 101% of GDP. The public sector accounted for 58%, 21% went to non-financial companies, and the rest to households (consumption and housing).

Against this backdrop, Banco de México's Governing Board lowered the reference rate by 25 basis points at its December 2024 meeting, and by 50 basis points at each of its February, March, and May 2025 meetings, reaching 8.50%.

Risks identified in the financial system

Banco de México uses both qualitative and quantitative indicators to assess a wide range of risks that may affect the stability of the financial system. These can be grouped into two broad categories: i) macro-financial risks, related to recent developments and possible deteriorations in domestic and international economic and financial variables; and ii) risks inherent to the financial system, to which households, companies, the public sector, commercial banks and other financial intermediaries are exposed, including disruptions that may occur in financial markets and payment systems.

With respect to the macro-financial risks that could affect the stability of the Mexican financial system—stemming from both the international and local economic and financial outlook, as well as their potential to trigger unexpected or severe shocks that could impair the system's proper functioning in the current complex and uncertain global environment — the following risks have been identified: i) a marked weakening of economic activity, at both the global and domestic levels; ii) increased potential for surprises in the trajectory of global financial conditions; iii) unanticipated adjustments in the credit ratings of key domestic issuers; and iv) the materialization of a systemic event with implications for the global financial system.

The quantitative analysis of various aggregate risk indicators shows that the Financial Conditions Index (ICF, for its Spanish acronym) eased, although it remains in the restrictive zone. The Financial Markets Stress Index (IEMF, for its Spanish acronym) decreased, while the aggregate risk of the financial system increased slightly. The macro-financial vulnerabilities index does not detect significant vulnerabilities in the Mexican economy overall, nor in the sectors analyzed (financial, real, external and public). Therefore, the economy is considered to be resilient to possible adverse economic developments.

Regarding the sectoral analysis of the risks inherent to the financial system, the following findings stand out:

Households

The financial position of households improved, driven by a peak in savings, and the relative stability of real total debt balances of borrowers over the past two quarters. On a year-on-year basis, banks' consumer loan portfolios and those of their related sofomes grew in real terms across all segments, particularly in the automotive segment. Overall, non-bank financing accelerated slightly, with trends differing between regulated and non-regulated intermediaries.

The non-performing loan ratio of consumer loan portfolios of commercial banks and their related sofomes decreased during the period. In contrast, non-performing loan ratios of non-bank financial intermediaries as a whole increased slightly. Also, the non-performing loan ratio of Infonacot decreased and that of sofipos increased marginally due to an increase in past-due loans.

Total financing to housing grew at a slightly higher rate than during the second half of 2024, driven by commercial banks, their related sofomes, and Infonavit. The non-performing loan ratios for banks' mortgage loan portfolios continued rising, albeit from historically low levels; those of Infonavit increased slightly as well, while those of Fovissste declined.

A decomposition analysis of changes in non-performing loan ratios by borrower gender showed that increased female participation in payroll, corporate, and mortgage loan portfolios contributed to lower non-performing loan ratios, a trend reinforced by a general improvement in repayment behavior, except in the mortgage sector. The decrease in financing costs also contributed to lower non-performing loan ratios in the personal, payroll, and business loan portfolios.

Companies

Total financing to private non-financial companies increased in real annual terms. The foreign component contracted due to a reduction in lending by banks from abroad and a decline in international debt issuance. However, domestic financing grew via all three main sources: bank credit, non-bank credit and debt issuance.

Corporate non-performing loans declined for both large and smaller companies, and for both foreign and local currency denominations, reaching historically low levels. Similarly, the non-performing loan ratio for credit granted to companies by non-regulated non-bank financial intermediaries decreased. While the Vulnerability Index of Listed Companies (IVEL, for its Spanish acronym) increased slightly, it remains in the low vulnerability zone. Operating cash flow increased in real annual terms, thus contributing to the decline in indebtedness and debt service costs.

However, some listed companies registered financial indicators at levels that suggest potential financial vulnerabilities. The number of such companies remained stable and banks' exposure to them is low relative to their regulatory capital.

Public sector

The public sector balance registered a slightly lower deficit in 2024 than the level projected in the Economic Package. The Federal Government anticipates a public sector balance deficit of 3.3% of GDP by the end of 2025, with Public Sector Borrowing Requirements estimated in a range of 3.9-4.0% of GDP. Meanwhile, state governments registered no changes in their credit risk profiles, while nine municipal governments exhibited an improvement and two saw their profiles deteriorate.

Banking sector

As of the first semester of 2025, commercial banks maintained high levels of capitalization and liquidity, exceeding regulatory minimums. The stress tests show that the banking system overall has adequate

capital and liquidity levels to face the simulated adverse scenarios.

Commercial banks' credit risk increased marginally, due to an increase in the risk of the business loan portfolio. Also, market risk increased slightly due to shifts in the composition of banks' portfolios towards instruments that are more sensitive to interest rates, and positions with greater foreign exchange risk. Liquidity risk remained stable and limited, while contagion risk was close to its average of recent months.

Other non-banking financial intermediaries (NBFI)

The NBFI sector has heterogeneous funding structures, with some entities relying mostly on traditional funding, and others on non-stable sources that continue to face challenges. Nevertheless, total financing granted to the non-financial private sector by NFBIs increased in real terms as of March 2025. Some entities registered risk indicators at levels that suggest financial vulnerabilities, with an increase in the number of such entities, but a reduction in their share of total assets. Notably, banks' exposure to these entities remains low relative to their regulatory capital. Therefore, a potential default by such entities would not pose a risk for the banking system.

Environmental and cybersecurity risks

Environmental risks can affect the stability of the financial system. For this reason, Banco de México, in coordination with other authorities, assesses their impact on the economy and the financial sector to promote their proper management and mitigation. In this regard, commercial banks' indirect exposure to transition risks decreased; however, their direct exposure increased. In terms of physical risks, floods are the hydrometeorological phenomenon with the greatest impact on corporate and mortgage loans. The banks most exposed to flood risks show higher profitability, which could enhance their resilience.

Cybersecurity risks remain one of the main threats to the global and Mexican financial systems, particularly those associated with the increasing use and growing sophistication of Artificial Intelligence (AI). According to indicators developed by Banco de México to actively monitor these risks, the cybersecurity levels of the Mexican financial system are deemed adequate. Banco de México also promotes exercises aimed at strengthening cyber-resilience.

Policy measures implemented

During the first half of 2025, the financial authorities took actions to strengthen the regulatory framework by adopting best practices and international standards to ensure it remains robust and up to date. Regulatory changes were implemented in the areas of credit risk, accounting standards, securities lending transactions, derivatives markets and sustainable finance.

Final remarks

As this *Report* shows, the Mexican financial system remains stable and resilient; however, challenges persist in the current uncertain and evolving global environment. In this regard, our financial system maintains solid fundamentals, reflecting adequate liquidity and capital levels, as well as prudent risk management.

Going forward, Banco de México remains attentive and vigilant to the evolution of the country's financial markets and will take the necessary measures, in coordination with other authorities and within the scope of its legal mandate, to preserve the stability of the financial system and ensure the proper functioning of the payment systems.

Introduction

The financial system's proper functioning is essential for Banco de México to fulfill its primary objective of ensuring the stability of the national currency's purchasing power, as monetary policy transmission mechanisms are more effective under these conditions. Likewise, a stable financial system allows the economy to achieve balanced and sustained growth. In contrast, if the functioning of a large part of the financial system is affected due, for example, to the materialization of common macro-financial risks among the different participants in the system (that is, systemic risk), there is a significant adverse impact on society in terms of a reduction in the levels of economic activity, employment and income.

Among its core objectives, Banco de México seeks to foster the sound development of the financial system and promote the proper functioning of the payment systems. To achieve this, it identifies, monitors and analyzes potential vulnerabilities and macro-financial imbalances that could amplify an unexpected shock and trigger systemic disruption. It also monitors risks that could affect financial stability. The results of this analysis are disclosed through its *Financial Stability Report*, so that, through its disclosure, the economic and financial sectors, as well as other economic agents, can also learn about them and contribute to their mitigation. This *Report* also details the macroprudential policy measures implemented during the period, as they help to mitigate the financial system's vulnerabilities, thus seeking to strengthen its stability and resilience.

As of the latest assessment, Mexico's financial system as a whole remains sound, with capital and liquidity levels that generally exceed regulatory minima. These elements underpin the system's capacity to withstand macro-financial shocks in a complex and uncertain global economic environment.

During the first half of 2025, the global macroeconomic, financial and geopolitical context remained complex and uncertain, mainly due to increased trade tensions following the United States' announcement of tariffs on several of its trading partners. So far in 2025, headline and core inflation have exhibited different behavior, both in advanced and emerging economies. Inflation still remains above the central banks' targets in most countries. The global economy has slowed its pace of expansion since the fourth quarter of 2024. The IMF pointed out that a slowdown in growth is expected in both advanced and emerging economies.

International financial markets also exhibited volatility driven by uncertainty generated by changes in the US trade policy and their possible impact on global economic growth. In addition, due to the aforementioned uncertainty, global financial conditions could exhibit significant surprises with respect to expectations and, in some scenarios, elevated financing costs may persist.

Headline inflation in Mexico is expected to converge to its target by the third quarter of 2026. The balance of risks for the expected trajectory of inflation over the forecast horizon, although still to the upside, is considered to have improved as global shocks have been resolved. Domestically, the economy also showed signs of weakness, with heightened uncertainty stemming from the tariff measures announced by the United States. In terms of economic activity, GDP for the first quarter of the year reported quarterly growth of 0.2%, driven by a spike in primary activities and slightly negative performances in secondary and tertiary activities.

In the fixed-income market, the yield curve has declined significantly, with downwards adjustments of more than 120 basis points in short-term bonds, of more than 80 basis points in the medium-term bonds- and up to 57 basis points in the long-term instruments. The Mexican peso has appreciated, in line with the weakness of the US dollar, since the previous *Financial Stability Report*, while liquidity and market depth conditions have improved compared to the second half of 2024, albeit with some episodes of temporary volatility.

The structure of this Report is divided into five sections. Section I provides a comprehensive review of macro-financial conditions. Section II offers an update on the challenges of the economic environment. Section III describes the policy measures implemented to preserve the sound development of the financial system. Section IV presents the risks of the financial system: aggregate risk indicators are identified, the positioning of the economic agents participating in the Mexican financial system is detailed, and the diagnosis of the

financial and non-financial entities in the system is discussed in depth. Furthermore, environmental risks and risks related to sustainability are presented. Section V shows the results of stress tests and recovery plans for commercial banking institutions are presented. Lastly, final remarks are presented.

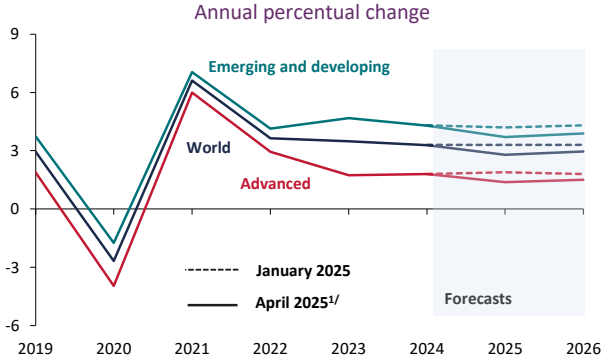
I. Macro-financial conditions

I.1. International economic outlook

In the fourth quarter of 2024, the global economy increased its growth pace compared to the previous quarter, with marked differences between countries. The United States recorded solid growth, outpacing that of other advanced economies, while emerging economies maintained a similar pace to the third quarter. In the first three months of 2025, trade uncertainty increased following the announcement of tariffs by the United States against several of its trading partners. In this context, the global economy is estimated to have exhibited growth at a slower pace than in the last quarter of 2024, both in advanced and emerging economies.

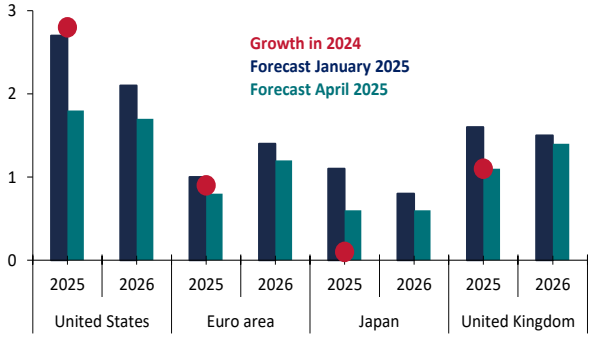
Global growth projections for 2025 and 2026, published by the International Monetary Fund (IMF) in April 2025, showed notable downwards revisions with respect to those of January (Graph 1 and Graph 2), with lower growth prospects for both advanced and emerging economies. In the United States and the euro area, the lower dynamism reflects increased political uncertainty, trade tensions, and sluggish domestic demand. In emerging economies, the outlook was also revised downward, particularly for the countries most affected by the announced tariff increases.

Graph 1
GDP growth forecasts
Annual percentual change



Data as of April 2025.
Source: IMF, World Economic Outlook, January and April 2025.
1/ Corresponds to the "reference forecast" that includes the trade measures announced until April 4, 2025.

Graph 2
Growth in 2024 and forecasts for 2025 and 2026
Annual variation in percent



Data as of April 2025.
Source: IMF, World Economic Outlook January and April 2025.
1/ Corresponds to the "reference forecast" that includes the trade measures announced until April 4, 2025.

In the fourth quarter of 2024, inflation increased in some advanced economies, driven by higher energy prices and, to a lesser extent, food prices. However, core inflation was generally lower than in 2023. In emerging economies, annual inflation exhibited heterogeneity, reflecting the particularities of each country. With respect to 2025, headline and core inflation have shown heterogeneous behavior for the time being, both among advanced and emerging economies. In most countries, inflation remains above the targets set by their respective central banks.

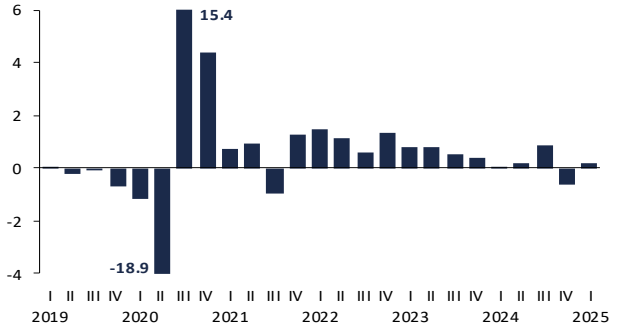
During the period covered by this *Report*, the Federal Reserve (Fed) reduced the target range for the federal funds rate by 25 basis points, establishing it at a range between 4.25% and 4.5% in December 2024.

However, the range remained unaltered at its January, March, and May 2025 meetings. The Federal Open Market Committee (*FOMC*) has observed a further escalation in the uncertainty surrounding the economic outlook. FOMC has indicated that it is closely monitoring risks related to both aspects of its dual mandate and added that it believes the risks of higher unemployment and higher inflation have increased. The statement reiterated that, when considering the extent and timing of additional adjustments to the target range for the federal funds rate, the Committee will carefully assess incoming information, changes in the outlook and the balance of risks.

I.2. Domestic economic outlook

In the fourth quarter of 2024, domestic economic activity contracted by 0.66% compared to the prior quarter, as indicated by seasonally adjusted data, reflecting decreases in primary and secondary activities, as well as a loss of dynamism in tertiary activities (Graph 3). For the first quarter of 2025, Mexico's GDP exhibited a quarterly growth of 0.20%, with a rebound in primary activities and slightly negative performances in secondary and tertiary activities. Thus, in the first quarter of the year, the Mexican economy showed signs of weakness in a challenging environment, marked by increased uncertainty due to the tariff measures announced by the United States.

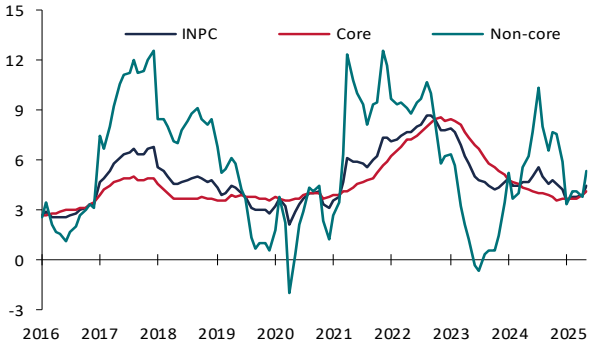
Graph 3
Gross Domestic Product s.a./
Quarterly variation in percent



Data as of first quarter of 2025.
Source: INEGI.
s.a./ Seasonally-adjusted figures.

Annual headline inflation declined from 4.51% in the fourth quarter of 2024 to 3.72% in the first quarter of 2025 (Graph 4). This was mainly driven by the sustained reduction in core inflation, which largely reflected the effects of implemented monetary policy actions. Concurrently, non-core inflation also showed a decrease, supported by the fading effects of some of some supply shocks. In May, the annual headline inflation stood at 4.42%.

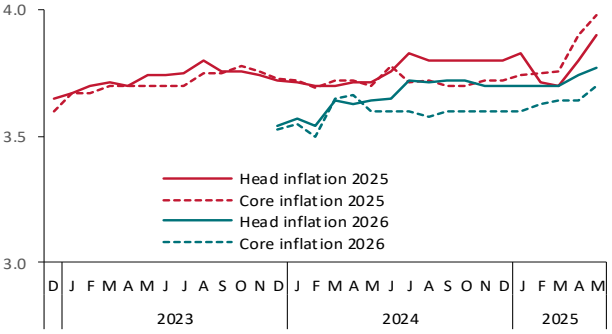
Graph 4
National consumer price index
Annual variation in percent



Data as of May 2025.
Source: INEGI.

Banco de México's headline inflation projections, published in the Quarterly Report, January-March 2025, stood at 3.3% and 3% for the end of 2025 and 2026. In the May Survey of Private Sector Specialists' Expectations, the medians of headline inflation expectations were 3.9% and 3.77% for the end of 2025 and 2026, respectively (Graph 5).

Graph 5
Inflation expectations[1/]
Percent



Data as of May 2025.
Source: Banco de Mexico, Survey of Private Sector Economic Specialists' Expectations.
1/ Median of annual inflation expectations.

During the period covered by this *Report*, the Governing Board of Banco de Mexico reduced the reference rate by 25 basis points in the December 2024 meeting, and by 50 basis points in the February, March, and May 2025 meetings, bringing it to 8.5%. In its most recent statement, the Governing Board

indicated that it would take into account the weakness in economic activity and the impact of the restrictive monetary stance on the inflation path over the horizon in which the monetary policy operates. It also reaffirmed the central bank's commitment to ensure that the reference rate would always be consistent with the path required to achieve an orderly and sustained convergence of inflation to the 3% target within the foreseeable term.

I.3. Financial markets

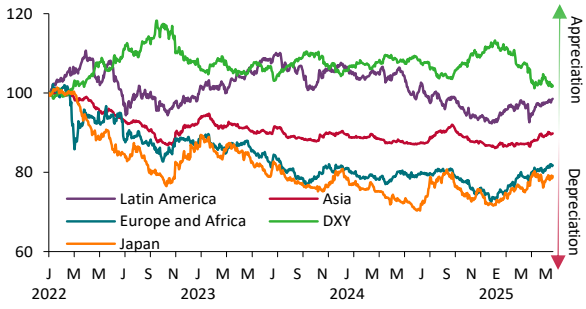
During the first half of 2025, the main factor behind the movements in the financial markets has been the uncertainty generated by changes in U.S. trade policy with its trading partners and their potential impact on global economic growth. The downward trajectory of inflation and the consequent expectation of a less restrictive monetary policy in most countries has also been an important factor. Finally, the various geopolitical risks have caused bouts of volatility.

Against this backdrop, emerging countries' financial markets have exhibited a differentiated behavior by region and asset type. Since December 2024, the currencies of these countries have shown a positive bias, aligned with the depreciation of the US dollar (Graph 6).

Graph 6

Foreign exchange indices performance 1/2/

Index (January 2022 = 100)



Data as of June 2025.

Source: Calculations by Banco de México with data from Bloomberg.

1/ Latin America incluides Peru, Brazil, Colombia, Chile and Mexico. Asia includes Philippines, South Korea, China, Malaysia and India. Europe and Africa includes a Poland, Hungary, Russia, Czech Republic and South Africa.

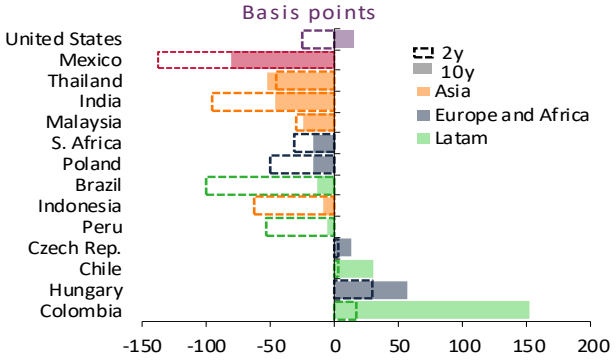
2/ DXY refers to the US Dollar Index calculated by the Intercontinental Exchange (ICE) as a weighted average of the nominal exchange rates of six currencies: Euro, Japanese Yen, British Pound, Canadian Dollar, Swedish Krona and Swiss Franc.

On the one hand, interest rates in emerging countries were volatile, although the downward trend was mainly caused by expectations of a less restrictive monetary policy stance in most of these countries (Graph 7). Finally, equity indices have presented a heterogeneous and volatile performance. Asian indices have been the most affected by trade tensions, although, like most indices, they have shown a significant recovery in recent days, in line with U.S. equity indices (Graph 8).

Graph 7

Change in 2 and 10-year rates of emerging economy sovereign bonds denominated in local currencies

Basis points



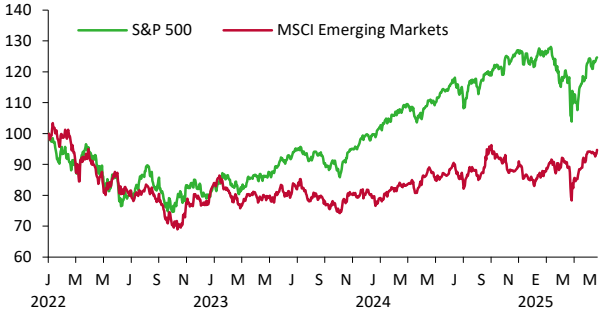
Data as of June 2025.

Source: Bloomberg.

Graph 8

Performance of equity indices

Index (January 2022 = 100)



Figures as of June 2025.

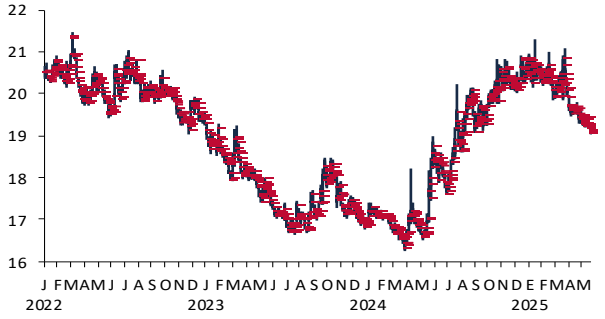
Source: Calculations by Banco de México with data from Bloomberg.

I.3.1. Foreign exchange market

During the first semester of 2025, the Mexican peso has traded in a range between 19.02 and 21.29 pesos per US dollar, registering some temporary volatility episodes. The main catalyst for its performance has been the uncertainty generated by changes in trade policy and the imposition of tariffs by the United States. Thus, during the period covered by this

Report, the peso has appreciated, in line with the weakness of the US dollar (Graph 9).

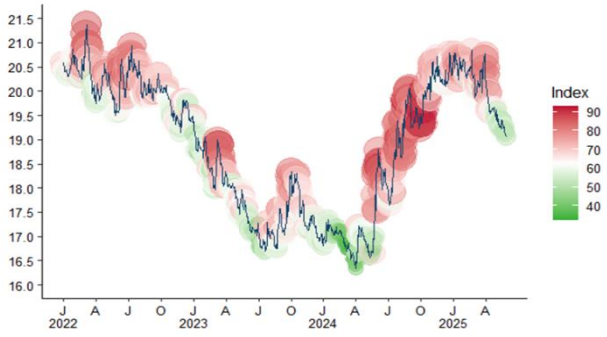
Graph 9
Mexican peso daily trading range [1/]
Foreign exchange mexican peso-US dollar



Data as of June 2025.
Source: Bloomberg.
1/ The red lines indicate the closing exchange rate, while the blue bars indicate the trading range.

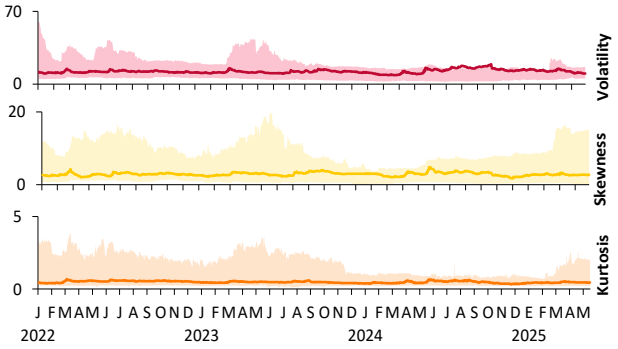
Trading conditions, including liquidity and depth, reflect an improvement compared to the second semester of 2024, while currency transactionality has not been constrained (Graph 10). Prospective trading conditions maintain a bias towards depreciation (Graph 11).

Graph 10
Mexican peso trading conditions index [1/]
Mexican pesos per US dollar; Index



Data as of Jun 2025.
Source: Calculations by Banco de México with data from Bloomberg and Refinitiv.
1/ The index is computed as the average of the percentiles of 1-month implicit volatility and skewness, volume and observed spreads. Percentiles are computed since 2018. Red (green) circles mean a greater (lesser) deterioration of the trading conditions in the FX market.

Graph 11
3-month implicit trading conditions on FX options for Mexico and selected emerging economies [1/]
Percent



Data as of June 2025.
Source: Bloomberg.

1/ The emerging countries included in the shaded area (range between the maximum and minimum values) are Brazil, Chile, Colombia, the Philippines, Hungary, India, Indonesia, Malaysia, Poland, South Africa, and Türkiye. The solid line represents the value of Mexico. The implicit skewness is measured through Risk Reversal strategies at 25 deltas. Kurtosis is measured with Butterfly strategies at 25 deltas.

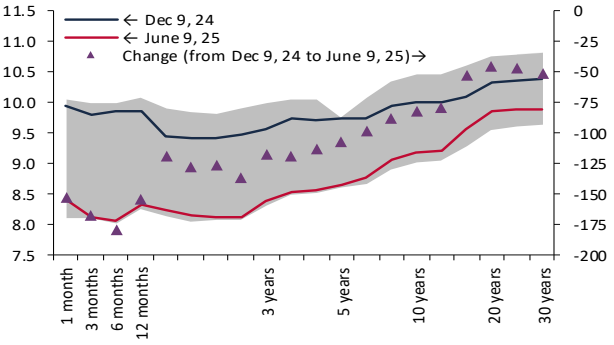
I.3.2. Fixed-income market

In Mexico, since the publication of the last *Report*, the yield curve has experienced significant declines, with downward adjustments of more than 120 basis points in short-term bonds, over 80 basis points in the medium-term, and up to 57 basis points in the long-term.

The decline in short-term rates is associated with the monetary easing cycle implemented by Banco de México since last year, while the adjustment in medium- and long-term rates may have been limited by the evolution of the corresponding rates in the United States.

This has led to a steepening of the curve, bringing the spread between 3-year and 30-year maturities to its highest level since June 2021 (Graph 12).

Graph 12
Cetes and M Bonds' yield curve [1/]
Left axis: Percent
Right axis: Basis points



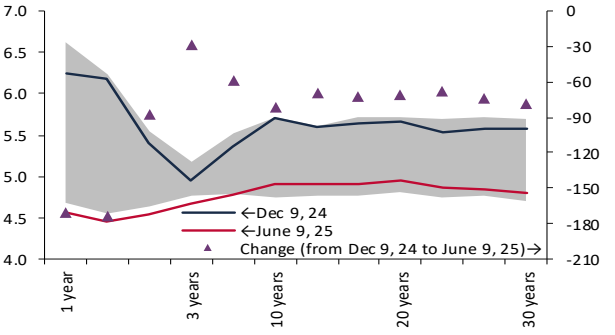
Data as of June 2025.
Source: Calculations by Banco de México with data from PIP.

1/ The grey area is the yield curve range since December 9, 2024.

The movements described in the government securities yield curve occurred in a context in which trading conditions showed an improvement with respect to the previous semester. Trading volume has increased, while bid-ask spreads and volatility decreased.

The real yield curve also showed decreases, which were similar in magnitude to those observed in nominal rate instruments (Graph 13). Thus, inflation breakevens and inflation risk have increased moderately in all maturities during the period.

Graph 13
Inflation-linked Bonds' yield curve
Left axis: Percent
Right axis: Basis points

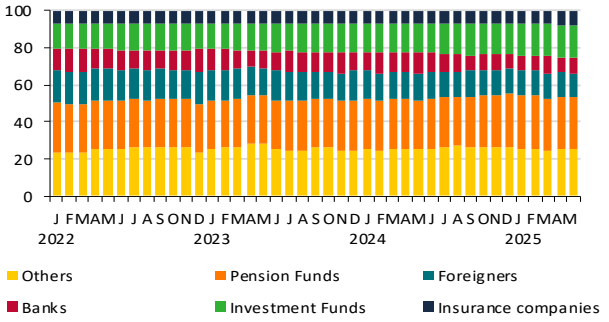


Data as of June 2025.
Source: Calculations by Banco de México with data from PIP.

1/ The grey area is the yield curve range since December 9, 2024.

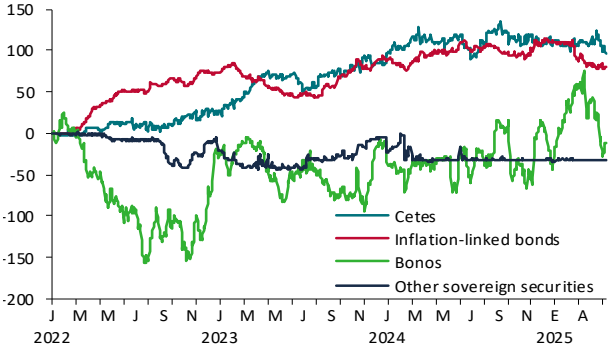
Capital Flows to peso-denominated assets by the non-resident sector showed high volatility. Thus, during the period covered by this *Report*, the total flow to government securities accumulated an outflow of 4,201 million pesos, although there was some heterogeneity by instrument (Graph 14). Specifically, Bonos M showed inflows of 37 billion pesos, mainly in the medium term, in bonds maturing between 2028 and 2034, as well as Bonos M maturing in 2053; on the other hand, Cetes and Udibonos showed outflows of around 20 billion pesos respectively (Graph 15).

Graph 14
Mexican sovereign debt holdings by sector, as a percentage of the total amount outstanding [1/]
Percentage



Data as of May 2025.
Source: Calculations by Banco de México with data from Indeval
1/ Securities considered are Cetes, M Bonds, Inflation-linked bonds, and Bondes. The sector "Others" include securities purchased by Banco de México, repos with Banco de México, guarantees received by Banco de México, and other national residents.

Graph 15
Sovereign securities' investment flows by foreign investors since 2022
Billion pesos



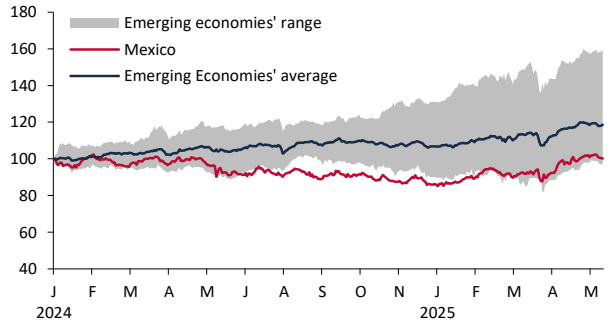
Data as of May 2025.
Source: Calculations by Banco de México with data from Indeval.

I.3.3. Equity market

Since the last publication of this *Report*, equity markets in Mexico have shown a positive performance, and even outperformed other emerging economies. However, from a medium-term

perspective, the performance of the Mexican Stock Market Index (IPyC) still shows a lag with respect to other countries' indices, reflecting the lower dynamism of the Mexican economy (Graph 16).

Graph 16
Equity indices' cumulative performance for selected emerging economies [1/]
Index (January 2024 = 100)



Data as of June 2025.

Source: Calculations by Banco de México with data from Bloomberg.

1/Emerging countries included are Brazil, Chile, Colombia, Philippines, Hungary, India, Indonesia, Malaysia, Poland, and South Africa.

Regarding the positioning in this market by non-resident investors, during the first semester of 2025 there was a negative cumulative flow focused on companies in certain sectors, such as the consumer sector.

Finally, there were no initial public offerings (IPOs) of Mexican companies during the period.

I.3.4. Derivatives market

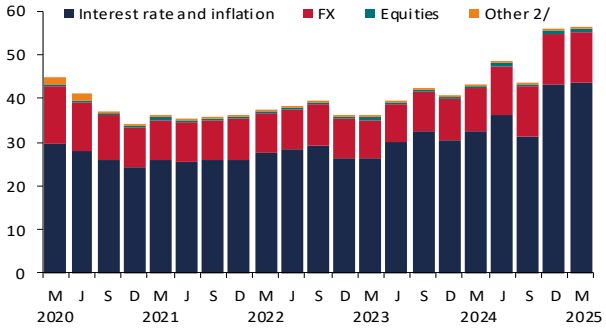
During the period from October 2024 to March 2025, the derivative transaction portfolio showed a growing trend, mainly in underlying assets related to interest rates and inflation.

During the period, interest rate swaps (*IRS*) cleared at Asigna and at the CME linked to the 28-day TIIE were replaced by transactions referenced to the TIIE Funding Rate (TIIE-F), as part of the transition process that Banco de México has promoted in consideration of international recommendations regarding the characteristics that reference rates should have.[1]

Likewise, the percentage of the notional value of *IRS* with underlying TIIE of 28 and not cleared in the clearing house decreased significantly, as a result of the Banco de México's prohibition to use such rate as underlying in new derivative transactions as of January 1, 2025.[2] This reduction reflects a migration towards the use of more robust reference rates based on real transactions, such as the TIIE Funding Rate (TIIE Funding Rate, its acronym in Spanish), in line with international standards.

Without considering the dynamics in the derivatives portfolio originated by the substitution of the TIIE, in November 2024 an increase in the derivatives position was observed, mainly in those transactions with underlying currencies and interest rates and inflation. It is worth mentioning that the increase in the notional amount of operations with foreign currencies as underlying was observed in the months of greater uncertainty in international markets. In addition, in this environment, *IRS* operations showed a change in their maturity, moving from a concentration mainly in terms of more than three years to operations with maturities of between 1 and 3 years (Graph 17).

Graph 17
Outstanding notional amount by type of underlying [1/]
Trillions of pesos



Data as of first quarter of 2025.

Source: Banco de México.

1/ As of the Financial Stability Report June 2021, Cross Currency Swaps (CCS) are clasificated as Foreign Exchange underlying asset.

2/ Includes debt, other derivatives and commodities.

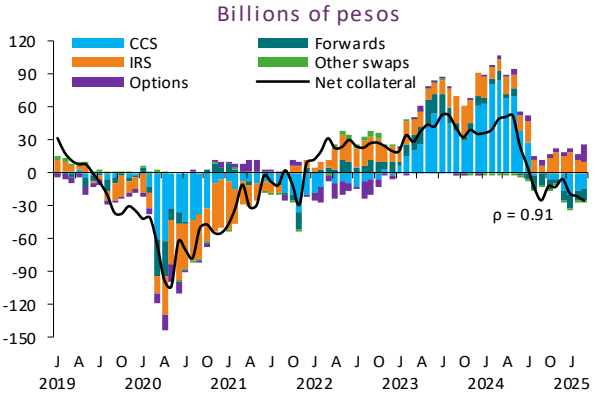
[1] For more details on the TIIE Funding Rate (TIIE Funding Rate (TIIE, its acronym in Spanish) replacement process, see the Derivatives Market section of the December 2024 Financial Stability Report.

[2] In September 2023, through Circular 7/2023, Banco de México prohibited the use of the 28-day TIIE as underlying in new derivative transactions as of January 1, 2025, with certain exceptions. Subsequently, with Circular 9/2024, it introduced additional exceptions allowing the use of such rate as underlying in new specific derivative transactions during 2025.

During the first quarter of 2025, Mexican companies, especially in the wholesale, retail and manufacturing sectors, significantly increased their transactions in exchange rate derivatives. This increase was most pronounced in March, where exporting and importing manufacturing industries recorded, compared to September 2024, increases of 74% and 82%, respectively, in the notional volume of these instruments. Likewise, equity derivatives, particularly in indices and information technology, spiked since December 2024.

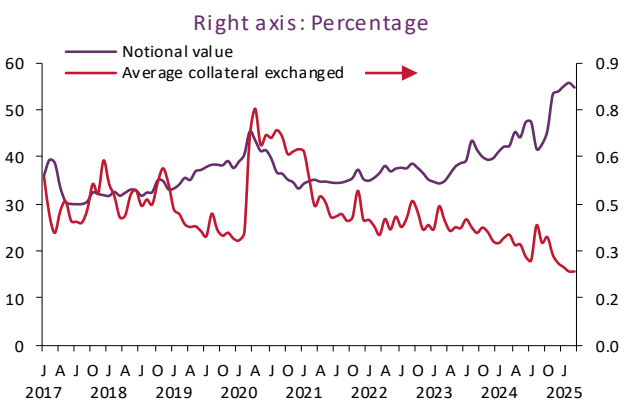
Volatility in the international financial markets, its impact on the exchange rate and its effects on interest rate curves caused a continued reduction in capital gains in the portfolio of derivative transactions on foreign currencies, which negatively affected the valuation of *Cross Currency Swaps* (*CCS*), reducing capital gains and causing financial institutions to deliver more collateral than they had received since August 2024. However, the proportion of collateral exchanged decreased in relation to the notional amount of derivative transactions (Graph 18 and Graph 19).

Graph 18
Relationship between the net value of the derivatives portfolio and the net value of collateral



Data as of March 2025.
Source: Banco de México.

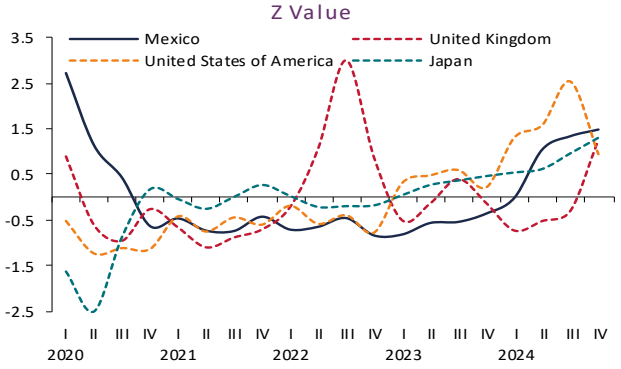
Graph 19
Portfolio notional value and collateral amount divided by the outstanding notional amount



Data as of March 2025.
Source: Banco de México.

It should be noted that, at the end of 2024, the Mexican derivatives market reflected trends similar to those of other economies, with *IRS* being the predominant in the domestic market (73.84% of the outstanding notional amount), which registered a growth in notional amount similar to that observed between the third and fourth quarter of 2024 in jurisdictions such as the United Kingdom, the United States and Japan (Graph 20).

Graph 20
Z value of currencies derivatives outstanding notional amount by jurisdiction [1/]



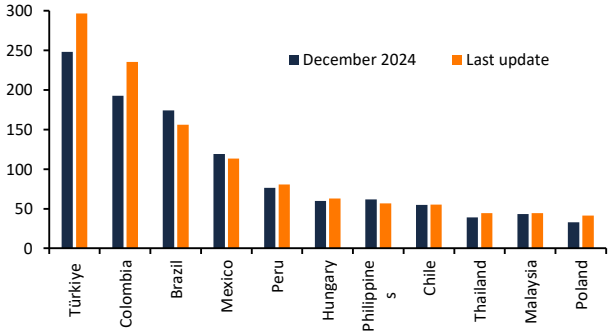
Data as of fourth quarter of 2024.
Source: Bank of England, Office of the Comptroller of the Currency (OCC), Bank of Japan and Banco de México.
1/ The Z value is calculated as the difference between the observed value and the mean of the corresponding series divided by its standard deviation: Z score=(x-μ)/σ. The parameters were estimated using quarterly data from 2020 to 2024.

On the other hand, as of November 2025, all OTC derivative transactions carried out by financial brokers in Mexico must include a Unique Product Identifier (*UPI*), this requirement follows the official recognition of *The Derivatives Service Bureau Ltd* (*DSB*) as an authorized *UPI* provider, announced by Banco de México on November 8, 2024.[3] The implementation of the *UPI* aims to improve transparency and oversight of the derivatives market, allowing for a more accurate identification of products and facilitating risk aggregation at a global level. This measure aligns Mexico with the recommendations of the Financial Stability Board (*FSB*) and the G-20 initiatives to strengthen the international financial infrastructure.

I.3.5. Risk premiums

Mexico's credit risk premiums, measured by the price of the credit default swap (*CDS*), showed moderate movements with some episodes of volatility during the period covered by this *Report*, in line with what was observed in the rest of the emerging countries as a whole (Graph 21).

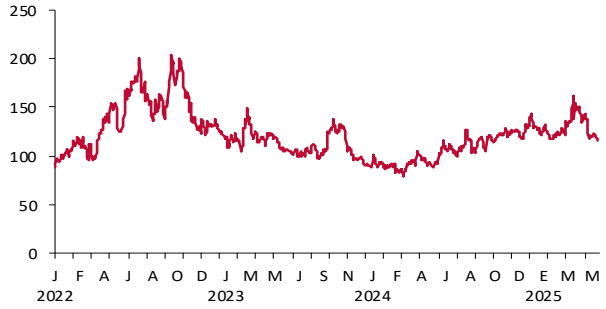
Graph 21
5 year CDS for selected emerging economies
Basis points



Data as of June 2025.
Source: Bloomberg.

Thus, the 5-year *CDS* on Mexico's sovereign debt is around 113 basis points, after reaching a level above 160 basis points in April (Graph 22).

Graph 22
5-year Mexico's CDS
Basis points

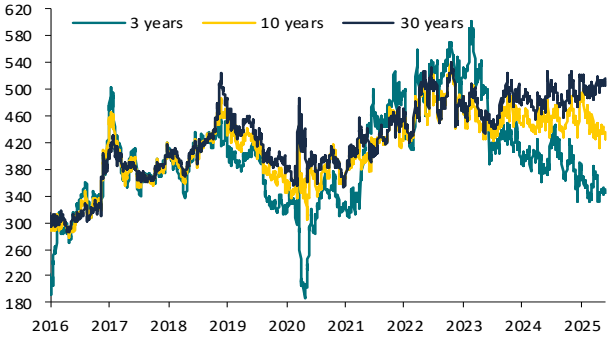


Data as of June 2025.
Source: Bloomberg.

Interest rate spreads between Mexican and U.S. bonds have compressed significantly during the period; however, they still remain above their historical average for the medium- and long-term, while the short-term is already below this average.

Finally, breakeven inflation rates increased marginally and remain at a level close to 450 basis points in the medium and long part of the yield curve. On the other hand, the short-term rate has consolidated at levels around 350 basis points (Graph 23).

Graph 23
Sovereign breakeven inflation rate
Basis points



Data as of June 2025.
Source: Calculations by Banco de México with data from PIP.

I.4. Macro-financial risks

The Mexican financial system remains solid and resilient, as evidenced by various monitored indicators, while its vulnerabilities are generally limited. Nevertheless, unexpected or severe shocks

[3] Rule 4.2 of Banco de México's Circular 19/2022 and Banco de México's press release with the recognition of the *UPI* provider company, which is available at: https://www.banxico.org.mx/publicaciones-y-prensa/miscelaneos/%7B4BFB87A7-C809-99EC-391A-23121FE73ED0%7D.pdf.

could impair its proper functioning. This highlights the importance of identifying and monitoring macro-financial risks that may arise in a complex and uncertain global environment such as the current one.

Sharp weakening of economic activity, both global and domestic

Short- and medium-term projections for global and domestic economic activity have deteriorated, with uncertainty rising significantly amid prevailing international trade tensions and the possible implications of protectionist measures. In this context, the long-term performance of the global economy could also be affected if trade frictions lead to a reconfiguration of global value chains resulting in efficiency losses. This would impact both the level and growth rate of potential output.

A slowdown in both the global economy and cross-border trade flows would adversely affect the domestic economy. This would directly weaken the external component of aggregate demand, which could also indirectly dampen domestic consumption and investment —both public and private. If this scenario were to materialize, it could undermine the stability of the global financial system, and for certain jurisdictions in particular. This impact would largely stem from pressures on the real income of households, firms and governments, potentially eroding the profitability of financial intermediaries. This could occur through weaker demand for credit and higher funding costs and credit risks, as borrowers' payment capacity deteriorates and fiscal constraints intensify. Additional deterioration in other risk indicators and associated risk premiums cannot be ruled out.

Increased potential for surprises in the trajectory of global financial conditions

In a global environment where risks to both economic activity and inflation have simultaneously increased, global monetary policy uncertainty has risen over the past half year.

In addition to the difficulty this implies for the formation of expectations, the possibility of deviations from the expected adjustments in central banks' reference rates has increased. If such deviations were to occur, they could exacerbate high volatility and risk aversion in international financial markets, thus magnifying the potential for surprises in the future trajectory of global financial conditions and potentially triggering a negative feedback loop.

The materialization of this risk could have adverse implications for both the global economy and the stability of its financial system. Unexpected shocks that restrict financial conditions would result in the persistence of generally high financing costs for households, companies and governments, further slowing economic activity and worsening vulnerabilities associated with high levels of indebtedness, both public and private, in some countries.

Unanticipated adjustments to the credit ratings of key domestic issuers

Since the last *Report*, two of the main global rating agencies reaffirmed their credit assessment of Mexico's long-term foreign currency-denominated sovereign debt at levels consistent with investment grade, both maintaining a stable outlook (Graph 24). Similarly, Pemex's debt rating and outlook remained unchanged during the period, given the ratification of both elements by one of these rating agencies.

As for sovereign debt, these agencies point out that its investment grade is supported by a prudent macroeconomic policy framework, highlighting the federal government's commitment to reducing the fiscal deficit and stabilizing the trajectory of public debt. They also emphasize the country's resilient external finances in the context of a diversified economy, while the stable outlook incorporates its prudent monetary policy outlook. However, according to the same agencies, Mexico's credit assessment faces challenges associated with public finances and the uncertainty surrounding the imposition of tariffs by the United States since, given the strong economic integration between both countries, it could dampen Mexico's economic activity and growth outlook.

Regarding Pemex, the aforementioned agencies note that its inclusion in the Federal Government's budget for the second consecutive year signals continued government support, which is favorable for its evaluation. Nevertheless, they also point out that the company still presents financial vulnerabilities, while

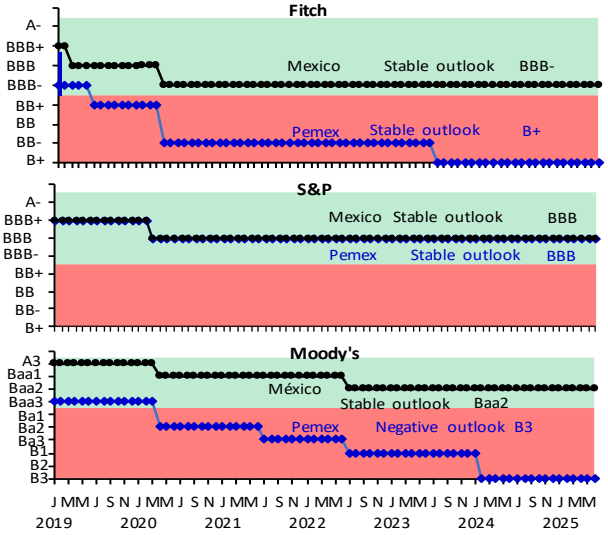
its access to market funding may be limited partly due to its track record in complying with Environmental, Social and Corporate Governance (ESG) criteria.

Should unexpected adjustments materialize in the credit ratings of Mexican sovereign debt or other key domestic issuers such as Pemex, the country's macro-financial risk profile could deteriorate significantly. This would likely be reflected in higher risk premiums, which could result in a potential decrease in (net) capital inflows, as well as generalized increases in financing costs for all domestic issuers.

Graph 24

Mexico and Pemex's foreign currency rating performance [1/]

Fitch, S&P and Moody's scales



Data as of June 2025.
Source: Fitch, S&P, and Moody's scale.
1/ The green areas show investment-grade ratings, while the red areas show speculative-grade credit ratings.

Materialization of a systemic event with implications for the global financial system

In view of the potential scope of recent and expected changes in various aspects of global economic policy, particularly in the trade area, as well as the instability of agreements in the geopolitical arrangements, the likelihood of a global systemic event occurring in the short term appears to have increased compared to six months ago.

The materialization of such an event would have immediate and broad cross-sector implications. Its effects, transmitted and potentially amplified through multiple channels, could undermine the stability of the global financial system, which would have an impact on our country.

Spikes in financial market volatility and risk aversion in response to such a shock would quickly tighten global financial conditions. As the disruption spreads through the financial system and financial markets, pre-existing vulnerabilities in certain sectors or specific market participants could intensify the shock's impact, ultimately weighing on global economic growth.

II. Update on challenges of the economic environment

Risk of lower remittances for commercial banks retail deposits

The U.S. labor market has lost dynamism in recent months, which could be accentuated by a potential slowdown in the growth of its economic activity. This weakening of employment and economic activity in the United States could impact the employment of Mexican migrant workers and, therefore, reduce remittance flows to Mexico.[4]

A reduction or slower growth in remittances could affect he Mexican financial system, particularly in regions exhibiting a greater reliance on these inflows. Previous analyses show that lower remittance levels are associated with elevated non-performing loan ratios, exerting a more substantial influence on personal loans, acquisition of durable consumer goods (ABCD) and microcredits, precisely the segments in which borrowers are more vulnerable and tend to rely more heavily on these resources.[5] On the liabilities side, previous editions of this *Report*

[4] In "*The impact of the US recession on immigrant remittances in Central America*" by Borja, K. (2012), it is found that major shocks in the US economy have an immediate and significant impact on remittances to El Salvador. In "*US Migrant Employment and Remittances to Central America: A Cointegration Approach. Financing the Family: Remittances to Central America in a Time of Crisis*" by Inchauste, G., and Stein, E. (2013) describes how remittance income is one of the channels of vulnerability to US business cycles.

[5] In "*Do Remittances Complement or Substitute for Consumer Credit? The Relevance of Heterogeneous Effects in the Mexican Context*" by Heres, D., Jaume, D., Tellez de la Vega, E., and Tobal, M. (2022), it is demonstrated that, in the case of personal loans, ABCD and microcredits, remittances primarily serve to prevent default. In the context of payroll and automotive loans, remittances have been shown to be more effective in increasing outstanding credit. Also refer to this same section "*Update on challenges of the economic environment*" *of the Financial Stability Report - December 2024* for the same topic.

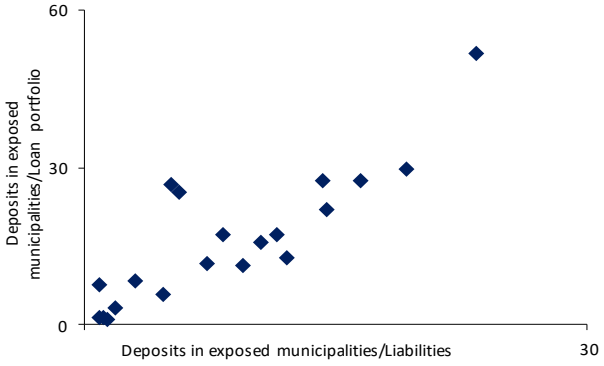
indicate that a decline in remittances may have a negative effect on retail deposits.[6] Specifically, a decline in remittances receipts tends to reduce demand deposits in regions that depend most on these transfers.

This section evaluates the exposure of commercial banks to the risk that a decline or slower growth in remittances could affect retail deposits. The measurement of this exposure is achieved through the consideration of demand deposits in the municipalities most dependent on remittances.[7]

The system's exposure is moderate, as the total amount of demand deposits in the dependent municipalities is limited, relative to total liabilities and loan portfolio. However, there are some banks for which the exposure is higher as a proportion of their total liabilities (Graph 25). A subset of this group consists of small and medium-sized financial institutions that rely primarily on demand deposits for funding. Conversely, larger banks have alternative funding sources and greater geographic diversification. Moreover, the exposure of these larger banks is lower when compared to the loan portfolio rather than to their total liabilities.

Graph 25
Exposure of immediate demand deposits to a lower growth in remittances

Percent

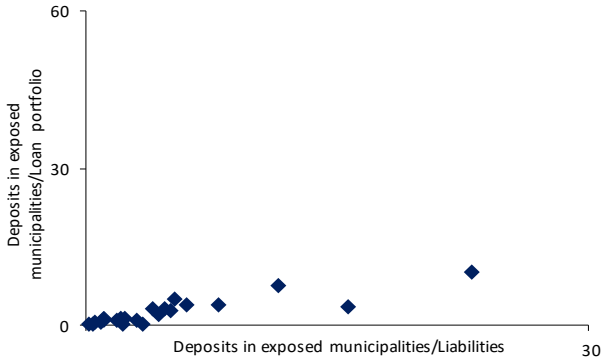


Data as of January 2025.
Source: Banco de Mexico, CNBV and INEGI.

In an alternative scenario, where only municipalities with the highest dependence on remittances are considered exposed, the system's total exposure decreases to 25% of the original level. Furthermore, under this alternative definition of dependent municipalities, the exposure of most banks previously considered exposed also declines significantly, both in relation to their total liabilities and their loan portfolio (Graph 26).

Graph 26
Exposure of immediate demand deposits to a lower growth in remittances

Percent



Data as of January 2025.
Source: Banco de Mexico, CNBV and INEGI.

[6] Box 3 *of the Financial Stability Report - June 2022* shows that remittances increase deposits in the municipalities that receive them.

[7] The most dependent municipalities are determined by a higher share of their income. Specifically, labor income—available at the municipal level—is used, and two scenarios are analyzed: one considering municipalities in the top quintile of the remittances-to-income ratio, and another considering those in the top decile.

Box 1: Social assistance and credit delinquency rates among the most vulnerable borrowers

I. Introduction

Financially vulnerable people tend to face more difficulties in meeting their credit obligations. They generally have lower incomes and face more barriers to immediate access to additional financial resources. Therefore, those who incur unexpected expenses may lack the resources to pay their short-term debts, that is, they may face "liquidity constraints". In this context, the receipt of additional income or the same income paid in advance, may allow the most vulnerable people to resolve their liquidity constraints and meet their credit obligations.

A recent case in which these financially vulnerable people received income in advance was the early disbursement of social assistance at the beginning of 2024. Due to the electoral process that year, the Federal Government decided to advance the transfers of certain assistance programs operated by the Welfare Secretariat, which were classified as priority programs.[1] For example, the payment corresponding to the March-April and May-June 2024 bimonthly periods for some social programs was made between January 29 and February 23.[2] This box evaluates whether, through a relaxation of liquidity constraints, the advance payment of these assistance helped the most vulnerable beneficiaries to pay their debts, thereby putting downward pressure on the non-performing loan ratio (NPL).

To that end, we compare the increase in transfers in the first two months of 2024 resulting from the advance in social assistance, with the changes in the non-performing loan ratio over the same period. The analysis focuses on non-revolving consumer credit, particularly in the segments of credit for the acquisition of durable consumer goods (ABCD) and personal loans. In these segments, there is a greater participation of vulnerable borrowers and of regions with higher levels of poverty, labor informality, and lack of housing services. These are the people and regions that benefit the most from social assistance, have lower incomes and therefore, are more likely face more liquidity constraints.

II. Liquidity constraints and additional resource transfers to vulnerable households.

When a person has access to credit, a temporary drop in income or an unforeseen expense does not usually have a significant impact on consumption or lead to default on debts. This access allows them to refinance, cover urgent needs, and repay gradually, without the need to alter their usual consumption level or default on payments.

People with lower incomes are those who usually face more difficulties in refinancing. Therefore, when they face liquidity constraints, they are more likely to adjust their consumption more or default on their loans in the event of a drop in their income.

The evidence suggests that income losses lead to defaults and adjustments in consumption, even when they are temporary. These adjustments are greater among the most vulnerable individuals, suggesting that they are driven by liquidity constraints, as these are the people who have the least access to refinancing, additional sources of income, or assets that can be sold. For example, Gruber (1997) shows that people of productive age who lose their jobs — and income temporarily— reduce more their food spending if they do not have unemployment insurance.[3] Zeldes (1989) shows that households with fewer assets cut their consumption more sharply when their income falls, reflecting that they face liquidity constraints.[4]

Gross and Souleles (2002) show that families living in regions with higher unemployment are more likely to default on credit card payments. According to Elul et al. (2010), unemployment increases the probability of

[1] Some of the characteristics of priority assistance programs are that they have a more relevant status within the Federal Expenditure Budget (PEF), are explicitly labeled as strategic government actions, are implemented and supervised by key agencies, have national coverage, and are focused on the most vulnerable populations.

[2] There are other priority programs, such as Urban Improvement, House by House Health, Production for Wellbeing, Fertilizers for Wellbeing or Benito Juarez Scholarships that do not involve direct monetary transfers or are not granted by the Welfare Secretariat.

[3] Ganong and Noel (2019) show that the spending of these households falls considerably [more] when unemployment insurance ends.

[4] Johnson et al. (2006) show that the 2001 tax rebate in the U.S. increased consumption, especially among lower-income households.

default on mortgage loans, especially among those with a high loan-to-value ratio.

In the case of Mexico, Heres et al. (2024) show that an increase in disposable income from higher remittances helps households repay their debts. Moreover, this effect is more pronounced for financially vulnerable individuals and in segments where loans are granted in poorer regions (ABCD and personal; see section III). This suggests that the increased remittances receipts contribute to relaxing households' liquidity constraints and helping them repay their debts.[5]

III. Advance payment of social assistance at the beginning of 2024.

The Federal Government operates several assistance programs, among which four stand out due to their implementation by the Welfare Secretariat, their classification as priority assistance and due to their wide coverage: the Pension for the Elderly, the Pension for the Permanently Disabled, the Support for the Children of Working Mothers and the Sembrando Vida program.[6]

The pension for the elderly benefits more than 12 million people and is universal in nature, targeting all Mexicans aged 65 and over.[7] Additionally, the related transfers account for nearly 7% of the formal wage bill.

Of the other programs, the pension for people with permanent disabilities is provided to people from 0 to 64 years of age who have this condition. The support for working mothers is aimed at mothers who do not have access to child care services, and Sembrando Vida is aimed at people engaged in rural activities.

The Federal Government advanced the payment of these assistance programs. Thus, the payment of the two-month periods March-April and May-June 2024 for the Pension for the Welfare of the Elderly, the Support for Persons with Permanent Disabilities or the Support Program for Daughters and Sons of Working Mothers was made between January 29 and February 23, following a staggered calendar in alphabetical order, while in Sembrando Vida two months were paid in a single transfer.[8]

IV. Credit for the Acquisition of Durable Consumer Goods (ABCD) and Personal Loans

Within non-revolving consumer credit, payroll, auto, personal, and ABCD loans are associated with different terms, interest rates, and borrower profiles. This analysis focuses on ABCD and personal loans, because in these segments, there is a greater participation of vulnerable individuals, who benefit most from social assistance and tend to face greater liquidity constraints.

In addition, ABCD and personal loans are the segments where credit is granted in regions with more disadvantaged socioeconomic conditions.[9] The level of poverty, labor informality and lack of housing services in the average municipality—that is, the average of the level of each municipality, but weighting each one according to its participation in a given segment— are higher for ABCD and personal than for payroll and automotive.[10] In turn, poverty, informality and lack of services are higher for the ABCD segment than for the personal segment (Graph 1).

[5] Along the same lines, Baker et al. (2023) consider public transfers and show that households that received support through direct deposits and tax refunds during the COVID-19 pandemic used part of those resources to repay student loans and mortgages in the US. Agarwal et al. (2007) analyze the case of tax refunds made in 2001 and find a qualitatively similar result. In addition, several internal analyses suggest that recent increases in the minimum wage in Mexico have contributed to a reduction in payroll credit defaults among those who benefited directly.

[6] The information in this section is taken from the federal budget for 2024 and from the Ministry of Welfare's press releases. The resources of these programs are delivered directly to the beneficiaries. In the Pensions and Support for Working Mothers programs, payments are made every two months, while in the Sembrando Vida program, payments are made monthly.

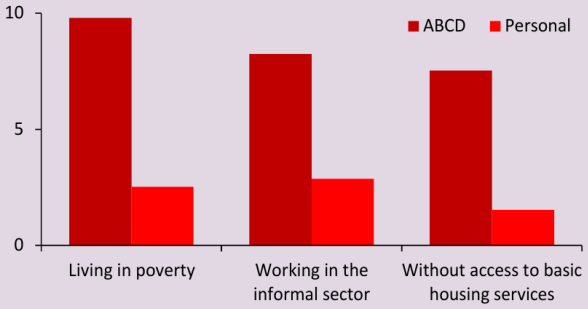
[7] The Pension for the Elderly accounts for 87% of the budget of the Welfare Secretariat and is an important source of income for many families.

[8] The beneficiaries of the Pension for the Elderly received 18,000 pesos, those of the Support Program for Children of Working Mothers received 9,300 pesos, and when the child has a disability, they received 10,800 pesos. The database of the Welfare Secretariat indicates that the beneficiaries of Sembrando Vida received 12,500 pesos, corresponding to May and June.

[9] For example, in regions where 50 percent of the poorest people in Mexico live, they obtain 53 percent of the total credit in the Personal and ABCD portfolios.

[10] These calculations are based on information from Coneval.

Graph 1
Differences in the socioeconomic conditions of borrowers in the ABCD and personal credit portfolios with respect to the other segments in the non-revolving credit portfolio[1/]



Source: Banco de Mexico and Coneval.
1/ The levels of poverty, informal employment, and housing shortages for the average municipality are illustrated for the ABCD and personal credit portfolios, and are compared with the same characteristics of the average municipality for the automotive and payroll portfolios. To calculate poverty, informal employment, and housing shortages for the average municipality, the average of the levels corresponding to each municipality was obtained, weighting each level according to its share in the corresponding credit portfolio. For ABCD and personal, the same calculation is performed, but considering both portfolios as if they were a single credit segment..

V. Data and Methodology

Bimonthly disaggregated information at the municipal level on non-revolving consumer credit from Banco de México is used, as well as data on transfers distributed by social asssistance, obtained from the beneficiary register of the Welfare Secretariat. To divide the transfers by the population of each municipality, data on the number of inhabitants is obtained from the 2020 Population and Housing Census.

We examine how the impact of social assistance varies across municipalities with different levels of poverty by collecting information on indicators developed by the National Council for the Evaluation of Social Development Policy (CONEVAL).

Using this information, the change in per capita transfers of a municipality is compared with the change in its non-performing loan ratio during the same period. To capture the effect of the advance in social assistance, changes are calculated between December 2023 and June 2024, that is, for the first half of 2024, when the advance in the payment of social assistance programs occurred. In particular, the following specification is considered:

$$\Delta\, IMOR_{jun\,24-dic\,23,m,c} = \beta_0 + \beta_1 X_m + \beta_2\ IMOR_{dic\,23,m,c} + \varepsilon_{m,c}$$

where $\Delta\, IMOR_{jun\,24-dic\,23,m,c}$, is the change in the delinquency ratio (NPL) in the credit segment c (ABCD or personal loans) during the first half of 2024 for the municipality m; X_m is the change in per capita transfers received by the municipality m during the same period; β_0 is a constant; $IMOR_{dic\,23,m,c}$ is the credit delinquency rate of the same municipality at the beginning of the period; $\varepsilon_{m,c}$ represents the random component; and β_1 is the coefficient of interest, i.e., the one that captures the change in credit delinquency associated with the increase in transfers per capita during the first half of 2024.

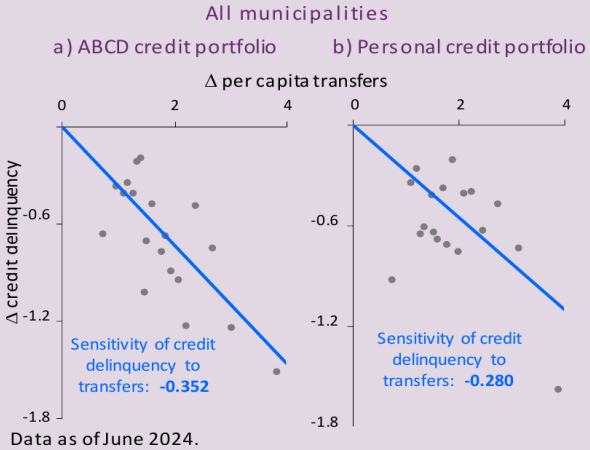
Thus, the analysis assesses whether the municipalities where per capita transfers increased the most due to the advance of social assistance are also those where credit delinquency rate decreased the most. The inclusion of the variable $IMOR_{dic\,23,m,c}$ ensures that the analysis does not consider changes in the credit delinquency of the municipalities that are explained by the occurrence of events other than the advance of social assistance, which could have begun to generate effects before 2024.

This analysis is performed for the ABCD loan portfolio and for the personal loan portfolio considering all municipalities. Subsequently, using the information collected to classify municipalities according to their poverty level, an additional analysis is performed in which the sample is divided in two, in order to understand whether the advancement of social assistance had a differentiated effect depending on the level of poverty.

VI. Results

The results indicate that the advance payment of social assistance was associated with a drop in credit default. This is because the municipalities with the greatest increase in transfers per capita were also those where the non-performing loan ratio decreased the most.

Graph 22
Relationship between the increase in per capita transfers received by a municipality and the change in its credit delinquency[1/]



Data as of June 2024.
Source: Banco de Mexico, Coneval, INEGI and Welfare Secretariat.

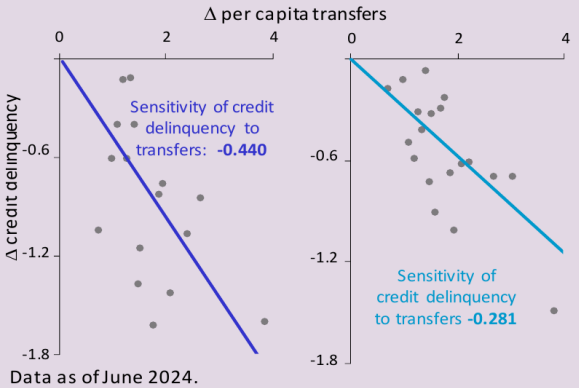
1/ The sensitivity of ABCD credit delinquency (NPL) to transfers per capita, considering all municipalities, is -0.352, a result statistically significant at the 1% level (2,352 observations). Meanwhile, the sensitivity of personal credit delinquency to transfers per capita is -0.280, also statistically significant at the 1% level (2,397 observations). In the graph, the slopes reflect these estimated coefficients, which refer to the sensitivity across the entire sample. However, the corresponding point cloud does not show all municipalities; instead, it presents the result of grouping them into 20 equal groups.

In the ABCD loan portfolio, an increase of 1,000 pesos in per capita transfers was associated with a decrease of 0.352 percentage points in the non-performing loan ratio, with the historical average of this ratio being 4.91% (panel a, Graph 2).[11] Thus, a one standard deviation increases in per capita transfers received by a municipality decreased its non-performing loan ratio by 0.25 percentage points for the ABCD segment.

In the personal loan portfolio, the effect of the advance on transfers is also statistically significant. For every 1,000 pesos increase in per capita transfers, the non-performing loan ratio decreased by 0.28 percentage points in personal loans, with a historical average of 4.67% for this ratio (panel b, Graph 2).[12] In this case, a one standard deviation increases in transfers per capita reduced the non-performing loan ratio by 0.18 percentage points.

This impact is lower than that observed for ABCD, which could be related to the fact that in the latter portfolio there are usually more vulnerable borrowers, with higher levels of poverty, labor informality and lack of housing services. These borrowers also tend to have less disposable income and less access to refinancing and could, therefore, face more liquidity constraints and use the transfers received to pay their debts.

Graph 3
Relationship between the increase in per capita transfers received by a municipality and the change in its delinquency in the ABCD credit portfolio[1/]



Data as of June 2024.
Source: Banco de Mexico, Coneval, INEGI and Welfare Secretariat.

1/ The sensitivity of ABCD credit delinquency (NPL) to transfers per capita was -0.281 in municipalities with lower poverty (1,194 observations) and -0.440 in those with higher poverty (1,157 observations), both significant at the 1% level (only one municipality could not be identified as having a poverty level). The slopes in the graph reflect these estimated coefficients, which refer to the sensitivity for the entire sample. However, the corresponding point cloud does not show all municipalities; instead, it presents the result of grouping them into 20 equal groups.

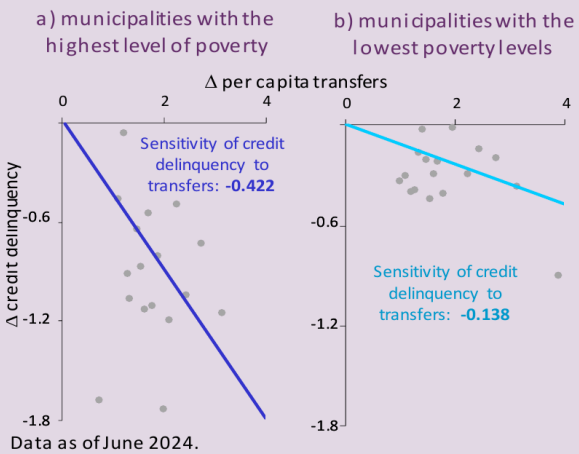
Likewise, when the sample is segmented by poverty level of the municipalities, it is observed that the effect of the advance in social assistance was more pronounced for the poorest municipalities (Graph 3). In these regions, the non-performing loan ratio of ABCD was reduced by 0.44 percentage points for every 1,000 pesos increase in per capita transfers,

[11] The historical average is calculated for a previous two-year period.

[12] The historical average is calculated for a previous two-year period.

while in the wealthier ones the reduction was smaller (0.281 percentage points). A similar result is found for the personal loans portfolio (Graph 4). Thus, the results suggest that the advance payment of social assistance, by granting early income to beneficiaries, helped them to pay their debts, thus contributing to reducing the credit delinquency of commercial banks.

Graph 4
Relationship between the increase in per capita transfers received by a municipality and the change in its delinquency in the Personal credit portfolio[1/]



Data as of June 2024.
Source: Banco de Mexico, Coneval, INEGI and Welfare Secretariat.
1/ The sensitivity of personal loan delinquency (NPL) to transfers per capita was -0.138 in municipalities with lower poverty and -0.422 in those with higher poverty, both significant at the 1% level. In the graph, the slopes reflect these estimated coefficients, which refer to the sensitivity across the entire sample. However, the corresponding point cloud does not show all municipalities; instead, it presents the result of grouping them into 20 equal groups.

VII. Final Considerations

The results suggest that the early payment of social assistance programs at the beginning of 2024 helped relax beneficiaries' liquidity constraints, thereby enabling them to meet their credit obligations. This, in turn, may improve their future access to credit by preventing negative records from appearing in their credit history that would otherwise have occurred. This contributed to reducing the credit delinquency of commercial banks in the loan portfolios for the acquisition of durable consumer goods (ABCD) and personal loans.

This effect was more pronounced in the ABCD portfolio, where there tends to be a higher participation of vulnerable borrowers, and regions with more disadvantaged socioeconomic conditions, i.e., more poverty, labor informality, and lack of housing services. Thus, the drop in credit delinquency was stronger precisely for the most vulnerable borrowers and regions, which, due to their characteristics, are those that tend to have less access to refinancing.

Taken together, these results emphasize the relevance of considering the presence of liquidity constraints. To the extent that a borrower's future income flow does not allow it to meet its credit obligations, default is inevitable. However, when this flow is sufficiently high, but the default is due to liquidity constraints, there may be room for the borrower to obtain refinancing and repay its debts.

Therefore, developing financial instruments that enable vulnerable individuals to protect themselves against emergencies, or that provide insurance to those who offer them refinancing, is of great relevance. If such refinancing were made available on favorable credit conditions, this would reduce the credit delinquency of borrowers and, thus, expand the client base and financial inclusion, with positive effects on the stability of the financial system.

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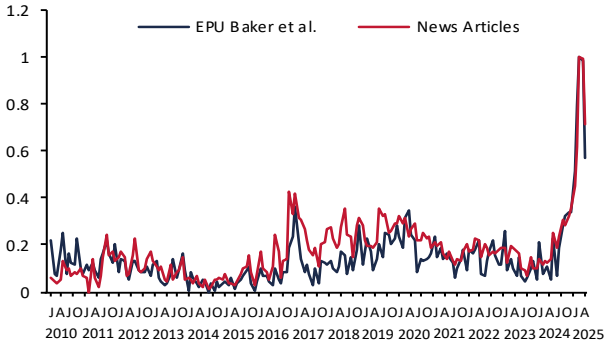
Evolution of uncertainty

In the first quarter of 2025, the level of uncertainty associated with economic policy exhibited a pronounced upward trend, according to the timely index calculated using information from news *websites*. However, the level of the indicator decreased during April and May, although it remains at a high level relative to historical observations (Graph 27). It is noteworthy that the level of this indicator is associated with a higher incidence of news related to the topics included in its construction.

Graph 27

Economic Policy Uncertainty Index[1/]

Uncertainty level



Data as of May 2025.

Source: Banco de México.

1/ The methodology proposed by Baker et al. (2016), was used to calculate the Economic Policy Uncertainty Index based on publications from news *websites*. In particular, the aggregated number of news articles including terms related to uncertainty, policy, and economy, is calculated. This series is divided by the total number of news released in each period and then is rescaled between 0 and 1, based on January 2010 to May 2025 period. The articles considered are extracted from various newspaper *websites*, in sections related to economics, finance, markets and business: Capital México (Economía), Diario 24 horas (Negocios), EFE Noticias (México), El Economista (Economía, Finanzas, Mercados), El Financiero (Economía, Mercados), El Heraldo (Economía), El Sol De México (Finanzas), El Universal (Cartera), Excélsior (Economía, Mercados), Forbes México (Economía, Finanzas, Negocios), Reporte Índigo (Economía), La Crónica (Negocios), La Jornada (Economía), La Razón (Negocios), Milenio (Negocios), Reforma (Negocios) and SDP Noticias (Negocios).

Specifically, according to the media consulted for the estimation of the index, among the main factors that contributed to the level of the indicator during the period covered by this *Report* are: the start of the new administration in the United States and trade tensions with its USMCA partners, the European Union and China, the reduction in global economic growth forecasts and the negative performance of the main global stock indices. In the local context, the following topics have been mentioned: the possible effects of the tightening of tariff policies in the United States, the volatility of the exchange rate, and the downward revision of economic activity forecasts for Mexico.

III. Policy measures implemented to preserve the sound development of the financial system

During the period covered by this *Report*, the financial authorities carried out actions to improve the regulatory framework, including the adoption of best practices and international standards, in order to keep it robust and up to date. Against this backdrop, the financial authorities carried out the following regulatory changes in the areas of credit risk, accounting standards, securities lending transactions, derivatives markets and sustainable finance.

Regulation by Banco de México

In accordance with the amendments to the Investment Funds Law (LFI, its acronym in Spanish) published in 2023, Banco de México issued the Circulars 15/2024[8] and 16/2024[9], which regulate derivative transactions and securities lending, respectively. Both Circulars incorporate the figure of hedge investment funds, as well as the regulatory elements applicable to the operations carried out by such brokers.

Regulation by other authorities

The CNBV issued secondary provisions to complement the amendments to the Securities Market Law (LMV, its acronym in Spanish) on January 21st, 2025 in the Official Gazette of the Federation, which detail the characteristics of the issuances and issuers that may participate in the simplified scheme (see Box 2).[10]

As of March 2025, the CNBV made amendments to the Single Banking Rulebook (CUB, its acronym in Spanish) to:

- Permanently incorporate in Annex 4 of the CUB the facility that the CNBV originally granted on a temporary basis, in the context of the sanitary contingency caused by COVID-19, to simplify the loan origination process for amounts up to four million UDIS to smaller companies, in terms of

[8] Banco de México Circular 15/2024, published in the Official Gazette of the Federation on December 16, 2024.

[9] Banco de México Circular 16/2024, published in the Official Gazette of the Federation on December 16.

[10] General provisions applicable to simplified issuers and securities subject to simplified registration, published in the Official Gazette of the Federation on January 21, 2025.

the information and documentation that must be included in the loan files.[11]

- To provide clarity, as well as to improve the quality and comparability of information among financial institutions, by specifying that loans acquired from Infonavit or Fovissste which are past due must be classified in stage 3 of credit risk within a maximum period of 180 days as of the most recent missed payment.[12]

- Delay the term for the entry into force of the provisions published on June 14, 2024, for commercial banking institutions to establish internal controls on fraud, in order to comply in due time and form with their obligations contained in said regulation. Such deadlines range from July 1st, 2025 to January 1st, 2027, depending on the different obligations contained in the aforementioned provisions.[13]

Additionally, the CNBV published amendments to various regulations applicable to other financial institutions:

- Regarding Financial Reporting Standards (FRS), the CNBV postponed to January 1st, 2026 the effective date of some FRS applicable to certain financial brokers[14]. The deferral of the date in which this disposition will come into force is intended to allow entities to adapt their accounting information systems in order to converge the entry into force of the aforementioned FRS with the accounting criteria, loan portfolio rating, regulatory reports, approval, disclosure and content of the financial statements.[15]

- In order to make the requested requirements consistent with other financial brokers, the regulation applicable to financial group holding companies and subholding companies is modified to replace the financial indicators previously established in Annex 1 of the FRS with their own indicators aligned with the criteria published by the CNBV.[16]

- In the Single Issuer Rulebook (CUE, its acronym in Spanish), a simplification of the securities registration requirements was made to eliminate the obligation of the minimum capital limit that investment promotion corporations must comply with, as well as the obligation to provide annual information to corporations that have their progressive adoption program and do not have the figure of a commissioner.[17]

- In order to ensure that issuers' sustainability information is measurable, comparable and aligned with FRS, the CNBV established in the CUE the sustainability information that securities issuers and other market participants must submit to the Commission for the registration of their securities in the National Securities Registry (RNV, its acronym in Spanish), as well as the periodic information to be disclosed by issuers.[18]

[11] Resolution amending the General Provisions applicable to credit institutions, published in the Official Gazette of the Federation on September 30, 2024.

[12] Resolution amending the General Provisions applicable to credit institutions, published in the Official Gazette of the Federation on December 30, 2024.

[13] Resolution amending the General Provisions applicable to credit institutions, published in the Official Gazette of the Federation on March 31, 2025.

[14] The FRS that will postpone their entry into force are: B-17 "Determination of fair value"; C-3 "Accounts receivable"; C-9 "Provisions, contingencies and commitments"; C-16 "Impairment of financial instruments receivable"; C-19 "Financial instruments payable"; C-20 "Financial instruments receivable for principal and interest"; D-1 "Revenue from contracts with customers"; D-2 "Costs for contracts with customers" and D-5 "Leases".

[15] Resolution amending the resolution that modifies the General Provisions applicable to General Deposit Warehouses, Exchange Houses, Credit Unions and Regulated Multiple Purpose Financial Companies, published on January 23, 2018, published in the Official Gazette of the Federation on December 27, 2024. Resolution amending the resolution that modifies the General Provisions applicable to the activities of Savings and Loan Cooperative Societies, published on January 23, 2018, published in the Official Gazette of the Federation on December 27, 2024. Resolution modifying the resolution modifying the General Provisions applicable to Popular Savings and Loan Institutions, Integration Organizations, Community Financial Companies and Rural Financial Integration Organizations, referred to in the Popular Savings and Loan Law, published on January 23, 2018, published in the Official Gazette of the Federation on December 27, 2024.

[16] Resolution that modifies the General Provisions applicable to financial group holding companies and sub-controlling companies that regulate matters that correspond jointly to the national supervisory commissions, published in the Official Gazette of the Federation on March 14, 2025.

[17] Resolution amending the General Provisions applicable to issuers of securities and other participants in the securities market, published in the Official Gazette of the Federation on December 30, 2024.

[18] Resolution amending the General Provisions applicable to issuers of securities and other participants in the securities market, published in the Official Gazette of the Federation on January 28, 2025.

Box 2: Secondary regulation applicable to simplified securities issuers

I. Background

The size of the Mexican stock market is low in relation to the size of its economy, which has resulted, among other things, in limited access to financing for smaller companies.[1] In response to the above, in December 2023 the Securities Market Law (LMV) was amended to encourage the development, depth and competitiveness of the stock market. This will allow companies to increase their sources of financing, and institutional or qualified investors to have better options for investing their resources.

In order to facilitate access to securities market financing for Mexican and foreign companies with at least two years of operation and whose income is the result of their main activity, especially SMEs, the LMV created the simplified registration procedure.

The amendments to the LMV established that the CNBV should issue secondary regulation to complement them. These provisions seek to create regulatory conditions that allow a balance between facilitating access to financing for SMEs and preserving investor confidence.

This box summarizes the topics of these secondary provisions.

II. Secondary regulation applicable to simplified issuers[2] .

The purpose of the secondary regulation applicable to simplified issuers is to define the characteristics of the legal entities that may request and maintain the simplified registration of securities in the National Securities Registry (RNV) and, thus, to establish the classification of simplified issuers. Likewise, these provisions regulate the types of securities that may be subject to such registration and the process to carry it out.

Simplified Issuer Registration Scheme

As part of the process to simplify the registration of new issuers and to maintain the certainty of their compliance with the securities issuance requirements, the regulation establishes that broker-dealers and stock exchanges will participate in the review of such requirements. In this vein, a company seeking placement of an issuance under the simplified scheme must first go to a broker-dealer and, subsequently, jointly to a stock exchange to carry out the procedure described below:

- The broker-dealers will participate in the structuring of the transactions of the companies that intend to become simplified issuers, as well as in the preparation of their files.
- The broker-dealers will evaluate the companies that wish to participate as issuers, and may use the following criteria: 1) review that the documentation related to the simplified issuer and that corresponding to the securities subject to registration complies with the provisions of the secondary provisions, its manuals and the stock exchange internal rules; 2) make sure that the prospectus or summary prospectus is prepared in accordance with the applicable regulations, and 3) inform institutional or qualified investors of the risks inherent to the securities subject to simplified registration.
- The broker-dealers must review and, if applicable,[3] subscribe together with the simplified issuer the application for listing to the stock exchange where the securities will be brokered. Finally, broker-dealers may place and trade the securities subject to simplified registration exclusively with institutional or qualified investors, which are considered to have the experience to handle this type of investment.
- The stock exchanges will review the documentation of the file prepared by the broker-dealer. Likewise, in order to protect the interests of the investing public, they may establish in their internal regulations the listing and listing maintenance

[1] See Box 1 "Amendments to the Securities Market Law and the Investment Funds Law" of the June 2024 Financial Stability Report.

[2] The General Provisions Applicable to Simplified Issuers and Securities Subject to Simplified Registration were published in the DOF on January 21, 2025.

[3] When the broker-dealer provides the service of securities placement.

requirements they deem necessary, in addition to those established by the LMV and secondary regulations. Thus, the verification by the stock exchanges required by the regulation contributes to reduce the existence of possible conflicts of interest between the simplified issuer and the broker-dealer, when the latter provides the securities placement service.

- The stock exchanges, after reviewing and complying with the listing requirements established in their internal regulations, will proceed together with the issuer to request the CNBV its simplified registration in the RNV, for which the CNBV has a term of two business days. This procedure will also apply when any modification is made to the term, rate or amount of the simplified issue.

Characteristics of simplified issuers

In order to promote the participation of companies in the simplified securities registration procedure, under the principle of differentiated regulation, simplified issuers are classified into three types according to the instruments they may register, the amount of the issue and the annual aggregate per issuer or settlor:

- Simplified issuer level I may issue debt instruments for a maximum amount per issue of up to seventy-five million UDIs, and up to an aggregate amount per fiscal year of nine hundred million UDIs.
- Simplified issuer level II may issue debt instruments or asset-backed securities,[4] for a maximum amount per issue and accumulated per fiscal year of up to 1,250 million UDIs.
- A simplified issuer of shares must adopt the form of an investment promotion corporation, and may issue shares, ordinary participation certificates representing them or securities representing the capital stock of foreign companies, for a maximum amount per issue and accumulated per fiscal year of up to 1,250 million UDIs.

Against this backdrop, the information requirements to be provided by simplified issuers to broker-dealers and stock exchanges will depend on their type, being lower for level I issuers. In particular, for this level, the financial statement audited by an independent external auditor for the last fiscal year and the internal quarterly financial statements must be submitted. For level II issuers and simplified shares issuers, the financial statements for the last two fiscal years, audited by an independent external auditor, and the internal quarterly financial statements must be submitted. Additionally, for level II issuers, an opinion on the credit quality of the issuance issued by a securities rating agency is required.

Thus, the purpose of this classification is to establish requirements differentiated by company size in order to facilitate SME access to financing through market instruments, and at the same time limit the amount of financing that simplified issuers could receive, thus limiting the risks that could affect them. Likewise, by reducing the information requirements, it is intended to reduce the issuance costs for companies that have not participated in this market, or have done so in a limited manner, which may encourage them to access it. It should be noted that simplified issuances are subject to the same tax regime as ordinary issuances.

On the one hand, the regulation also seeks to protect potential investors and the financial system as a whole by requesting more information according to the amount of the issue and the securities to be registered by simplified issuers, by providing them with the elements to evaluate whether the issues are in line with their risk profile. In addition, it is expected that as simplified issuers participate in the securities market and acquire more experience, they will be able to increase the size of their issues in order to change their issuer level or access financing through the ordinary issuance scheme or, if applicable, issue shares under the simplified or ordinary regime.[5] In this vein, companies that currently participate in the securities market under the current ordinary issuance

[4] Currently, structured securities such as CKDs, Reits or Senior Trust Bonds for Investment Projects (Cerpis, its acronym in Spanish) may not be issued.

[5] In accordance with the provisions of the General Provisions applicable to issuers of securities and other participants in the securities market.

regulations will not be able to use the simplified issuance scheme.

III. Final remarks

The publication of the amendments to the LMV, as well as its secondary regulation, is an instrument through which we seek to create conditions in the financial markets that contribute to economic wellbeing. In particular, these amendments focus on the development of the Mexican stock market as an engine of growth and a source of financing for companies, particularly SMEs and companies that have not participated in this market, or whose participation has been limited. Likewise, they establish and homogenize the disclosure and transparency responsibilities with which both simplified issuers and the instruments they issue must comply, thus limiting the risks for investors in simplified issues. This is achieved through the participation of broker-dealers and stock exchanges in the review of the requirements with which issuers and the corresponding issues must comply. Although this procedure reduces the costs of financing through the stock market, it obliges the financial authorities to remain vigilant in the development and growth of this market.

References

Official Gazette of the Federation (January 21, 2025) *"General provisions applicable to simplified issuers and securities subject to simplified registration".*

Box 3: Implementation of the Total Loss-Absorbing Capacity (*TLAC*) requirements in Mexico

I. Background

Following the 2008 global financial crisis, the G20 authorities determined that Global Systemically Important Banks (*G-SIB*) must have sufficient capital and eligible debt resources to absorb losses and facilitate an orderly bankruptcy or resolution process, thereby minimizing negative impacts on financial stability and avoiding the use of public resources during these processes. Thus, the *Total Loss-Absorbing Capacity (TLAC*) standard was published by the Financial Stability Board (*FSB*) in 2015.[1]

Although there are no Mexican banks designated as *G-SIB*, the Mexican authorities decided to implement *TLAC* for those institutions identified as Domestic Systemically Important Banks (D-SIB) by the CNBV in Mexico,[2] which reduces the likelihood of a resolution process that could affect financial stability.

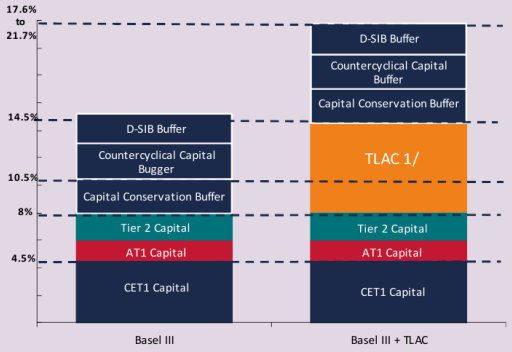
II. Implementation of the standard in Mexico

In 2021, the Mexican authorities introduced the *TLAC* requirement through the Net Capital Buffer,[3] in line with international best practices.

In accordance with the general provisions applicable to credit institutions published by the CNBV, the D-SIB must maintain an additional capital buffer equivalent to the greater of 6.5%[4] of the risk-weighted assets[5] (RWA) and 3.75% of the adjusted assets used to calculate the leverage ratio.

For the constitution of *TLAC*, eligible capital and debt may be combined, allowing the holders of these instruments to absorb losses of the banks, thus minimizing the use of the resolution fund or the risk of using public resources in a resolution process. Banks may consider the elements that are part of the core capital, as well as capital instruments that comply with the requirements established in Annexes 1-R (Additional Tier 1 Capital) and 1-S (Tier 2 Capital)[6] of the aforementioned provisions, whose remaining term to maturity is greater than one year and for the amount that has not been considered to comply with the regulatory minimum capital and other additional capital buffers to which they are subject,[7] as shown in Graph 1.

Graph 1
Capital requirements and *TLAC*
Per cent [1/ 2/]



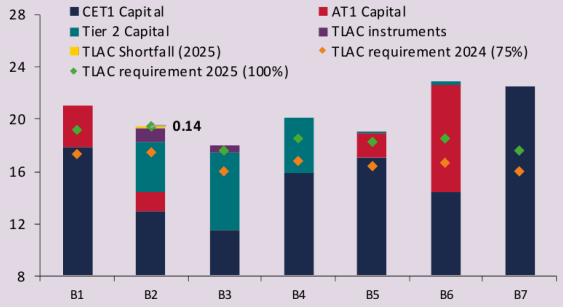
Source: Banco de Mexico.
1/ Percentages are shown relative to total risk-weighted assets. 2/ TLAC requirement wil be the equivalent to the greater of 6.5% of RWA and 3.75% of the adjusted assets used to calculate the leverage ratio.

To facilitate its implementation and to avoid disruptions to banking intermediation or other unintended consequences, this buffer was introduced gradually. In December 2022, 25% of the requirement was required, with annual increments of 25% of the requirement in December of subsequent years. As a result, D-SIB are subject to 75% of the total requirement as of December 2024 and in December 2025 must comply with 100% of the net capital surcharge.

As shown in Graph 2, six of the D-SIB already meet the full requirement (100%) as of March 2025. The rest have plans to meet the full requirement by the end of 2025, in line with regulatory requirements.

[1] The *FSB TLAC* standard can be consulted here.
[2] The eight banks designated as D-SIB and, therefore, subject to this requirement were unveiled on April 16, 2025. These are: Banamex, Banorte, BBVA, Citibank, HSBC, Inbursa, Santander and Scotiabank.
[3] RESOLUTION amending the General Provisions applicable to credit institutions, published in the DOF on June 18, 2021.
[4] This percentage considers the *FSB* standard and recognizes that in Mexico, there is a Bank Savings Protection Fund that can be used for bank resolutions and is financed by the industry.
[5] RWA are an institution's assets adjusted for risk factors. They correspond to the sum of risk-weighted assets subject to credit risk, equivalent weighted positions subject to market risk, and assets subject to operational risk.
[6] The SD are always computed at 100% for *TLAC* as long as they have a remaining term to maturity of more than one year. For capital computation purposes, the amount considered decreases in value when the remaining term to maturity is less than 5 years.
[7] That is, the Capital Conservation Buffer, Countercyclical Capital Buffer, and the capital requirements for D-SIB.

Graph 2
Implementation of the Total Loss-Absorbing Capacity (TLAC) requirements
Per cent [1/2/]



Data as of March 2025.
Source: Banco de Mexico.
1/ The percentages are shown relative to total risk-weighted assets. The diamonds show the TLAC and Minimum Capital requirements applicable to each bank in 2024 (orange) and 2025 (green). The figure shown in black indicates the resources needed to meet the 100% TLAC requirement; when this figure is missing, there is no shortfall.
2/ Citi Mexico is not shown in this chart with information as of March 2025 since it was designated as a BISL as of April 16, 2025. Consequently, it must maintain a Net Capital Supplement in accordance with the applicable regulations: 50% no later than the end of the sixth month (October 2025), 75% no later than the end of the ninth month (January 2026) and 100% no later than the end of the twelfth month (April 2026), counted from the month immediately following the one in which it was notified of its new status.

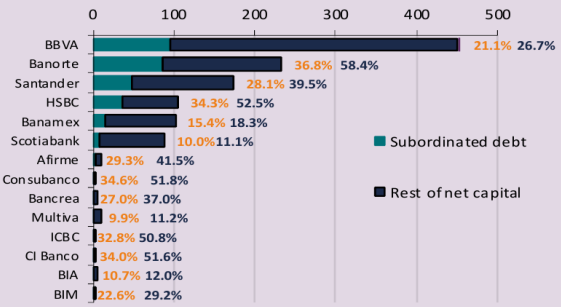
Based on data as of March 2025, the amount needed to satisfy the 100% *TLAC* requirement, due as of December 31, 2025, is close to 1.3 trillion pesos.[8]

In addition to the fact that the regulation allows D-SIB to use subordinated debt to meet *TLAC* requirements, these instruments can function as an element of market discipline linked to the performance of any institution, including D-SIB.

III. Subordinated debt in the Mexican banking system

Subordinated debt (SD)[9] are debt instruments with special characteristics that allow them to absorb losses in a resolution process and, therefore, under certain conditions established in the regulation,[10] can be computed as part of Net Capital, either in Additional Tier 1 Capital or Tier 2 Capital, and can also be used to comply with *TLAC* requirements.

Graph 3
Composition of the net capital of banks issuing subordinated debt
Billions of pesos and per cent [1/]



Data as of March 2025.
Source: Banco de Mexico y CNBV.
1/ The percentages show the amount of SD relative to net capital (orange) and core capital (blue), respectively.

Graph 3 shows that most of the D-SIB have this type of instrument, in addition to being the most important issuers. [11]

Six of the eight institutions designated as D-SIB maintain outstanding SD, which represent 96.9% of the total amount issued by commercial banks. Of this amount, 42.3% corresponds to instruments that count as Additional Tier 1 capital and the rest as Tier 2 Capital.

[8] The net result of these banks exceeded 230 billion pesos in 2024.
[9] These are debt securities issued by a banking institution or its holding company that have characteristics similar to bank bonds. These instruments absorb losses by converting them into the institution's capital or decreasing their value when regulatory capital reaches pre-set thresholds or when the institution receives government support. Interest payments to holders of these instruments may also be suspended under certain conditions. In addition, when complying with the conditions of Annexes 1-R and 1-S of the general provisions applicable to credit institutions, their payment must be subordinated to the prior payment of deposits and other liabilities of the institution, so that the holders of these instruments will have limited and subordinated rights against other creditors of the issuing bank. For example, in the event of a bank's settlement, they are only entitled to receive payments when senior debts such as customer deposits, secured loans, or labor liabilities of the institution have been satisfied, in accordance with the priority established in the Law of Credit Institutions.
[10] For example, Annexes 1-R and 1-S of the general provisions applicable to credit institutions.
[11] The characteristics of the SD are in Banco de México Circular 3/2012, and their regulation regarding capitalization is found in the General Provisions applicable to credit institutions of the CNBV.

Eight other commercial banking institutions have SD issues.[12] On average, the computation of the SD represents 5.1 percentage points of the CAR of commercial banks, which amounts to 19.9% as of March 2025.

Graph 3 also shows, for each issuing bank, the outstanding SD that compute as part of net capital, as well as the percentage it represents with respect to net capital and core capital. Five of the fourteen multi-bank issuers hold SD that exceed 50% of their core capital. However, in no case do they exceed this threshold with respect to their net capital. On average, SD represent 36% of the core capital and 26.4% of the net capital of the issuing banks.

The SD market in Mexico has experienced significant growth in recent years, reaching historic highs by the end of 2024. The issuance of this type of instrument is not only due to compliance with Basel III principles regarding the definition of Net Capital, but these instruments fulfil multiple purposes for the issuer, such as providing liquidity, facilitating capital management, and complying with loss-absorption requirements both in Mexico and in the countries of origin of the parent companies of the subsidiaries operating in Mexico.

In Mexico, the vast majority of SD are placed through mechanisms other than public offerings; this limits their function as an element of market discipline.

Finally, the rate at which D-SIB issues SD reflects the cost of complying with *TLAC*. Based on information from currently outstanding issuances made by the D-SIB, on average, the SD grant yields that are around 398 basis points higher than the reference rate (341 bps in the case of domestic issuances and 428 bps in the case of issuances placed abroad).

IV. Final considerations

The 100% implementation of the *TLAC* requirement by the end of 2025 represents significant progress in strengthening the resolution framework in Mexico. The implementation of the Net Capital Buffer allows for losses to be absorbed by shareholders and creditors holding *TLAC*-eligible instruments in the event of a bank resolution. This reduces taxpayers' exposure to failures of institutions that could be considered "too big to fail". In addition, its implementation also allows for strengthening the resilience of the system to severe stress scenarios without resorting to public resources. By requiring D-SIB to maintain greater resources for loss absorption, *TLAC* also helps reduce the risk of contagion to other financial institutions in the event of financial difficulties. This development aligns with the best international standards for risk management and promotes financial stability.

References

Financial Stability Board (2015): "*Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution*", November 2015.

Financial Stability Board (2019): *'Review of the Technical Implementation of the Total Loss-Absorbing Capacity (TLAC) Standard'*, July 2019.

Financial Stability Board (2021): "*Evaluation of the effects of too-big-to-fail reforms: Final Report*", March 2021.

[12] Afirme, Multiva, Bancrea, CIBanco, Consubanco, BIM, ICBC and BIA. In addition, Bancomext is a development bank institution that has issued SDs.

IV. Risks of the financial system

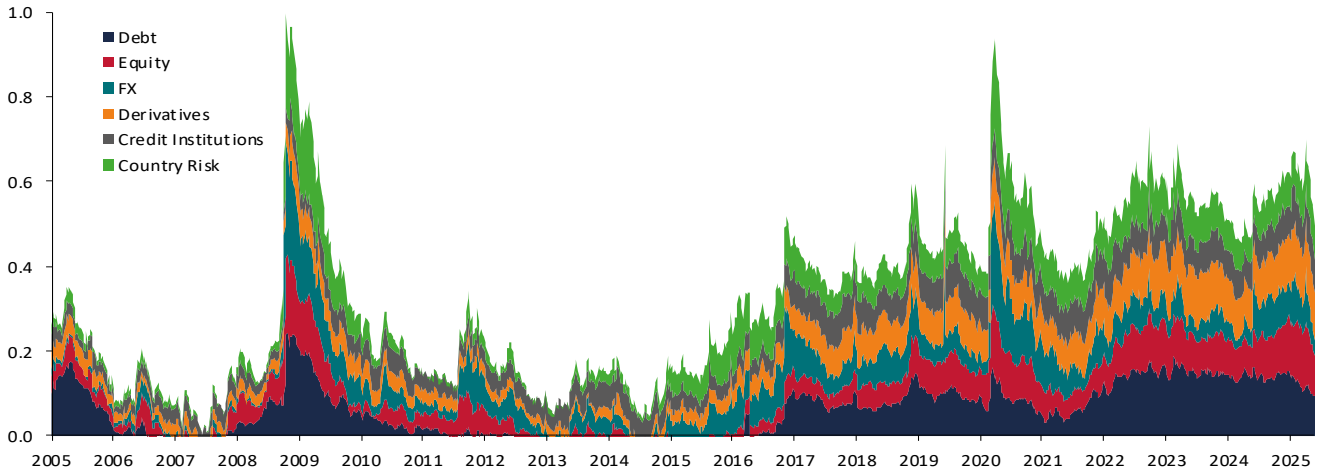
IV.1. Aggregate risk indicators

The Financial Markets Stress Index (IEMF) has declined since the previous *Report*. In mid-April, the index rose to levels not seen since early 2023, amid the banking crisis in the United States. This increase was mainly driven by geopolitical factors. However, by the end of May, the index had decreased (Graph 28). The decline relative to the previous *Report* is largely explained by the combined performance of variables related to debt, foreign exchange and stock markets. In contrast, stress levels increased in variables related to credit institutions and country risk.

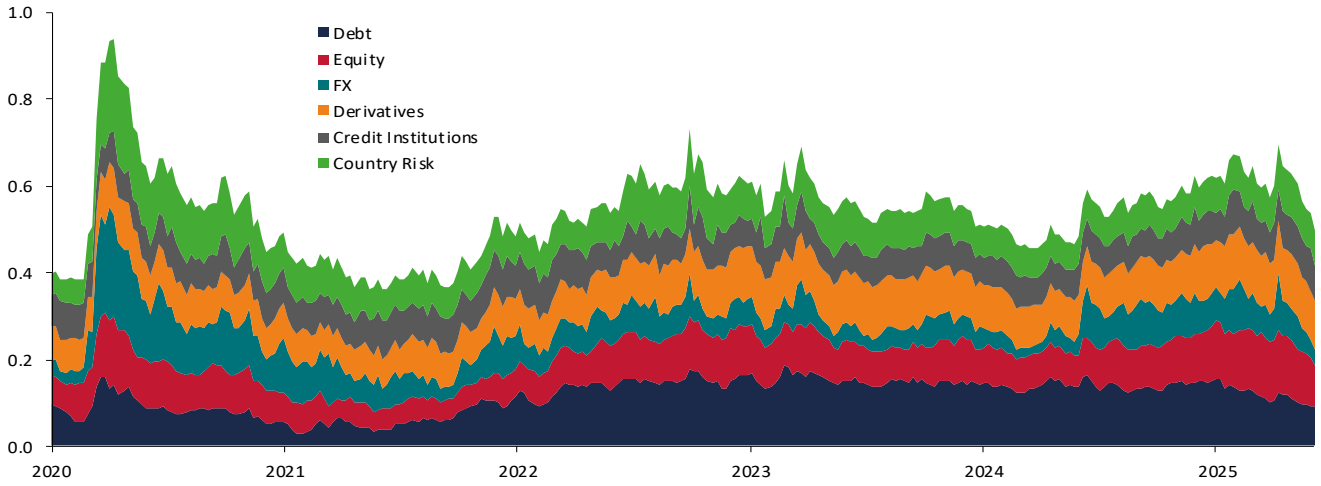
Graph 28

The Financial Market Stress Index [1/]

a) Stress level 2005-2025



b) Stress level 2020-2025



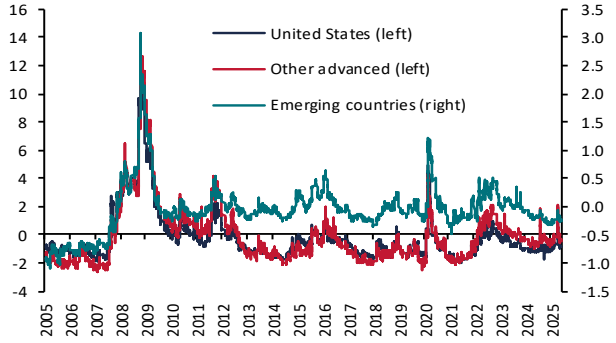
Data as of June 6, 2025.
Source: Banco de México.
1/ The index was estimated using a principal component analysis on 36 standard variables of Mexican financial markets grouped into 6 categories (debt market, equity market, FX market, derivatives market, credit institutions and country risk). Total components yields the index scaled at the [0,1] interval. A higher number represents higher financial stress.

The financial markets stress indices for the United States, emerging countries and other advanced countries increased compared to the previous *Report*, although they remain below their historical averages (Graph 29).

Graph 29

Financial Stress Index for others countries or regions[1/]

No unit



Data as of June 5, 2025.

Source: Office of Financial Research (OFR).

1/ The Financial Stress Index is a daily market-based snapshot of stress in global financial markets. The FSI shows stress contributions by three regions: United States, other advanced economies, and emerging markets.

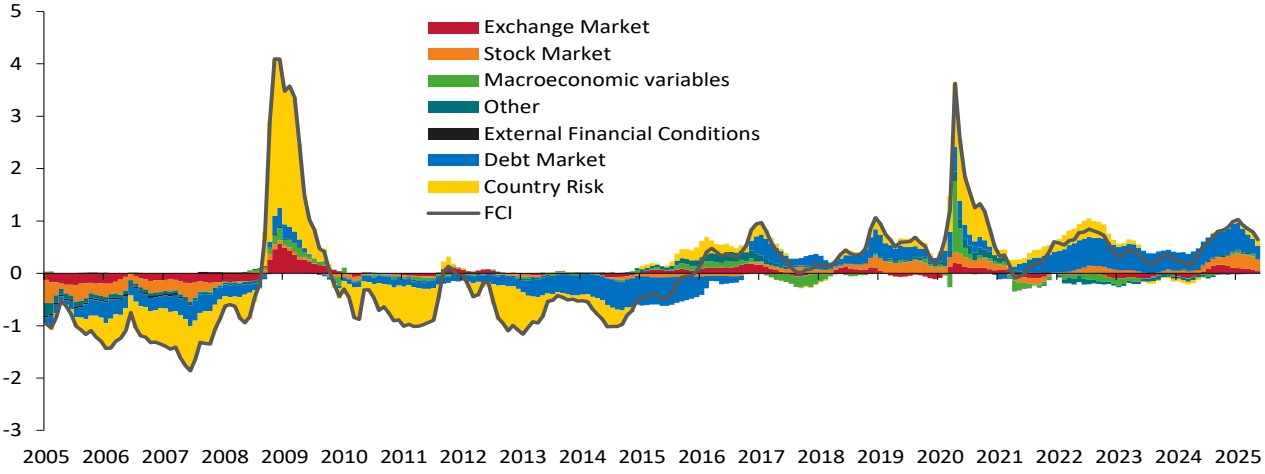
Mexico's financial conditions, as measured by the Financial Conditions Index (ICF), eased in May relative to the previous *Report*, although they remained in the tightening zone (Graph 30). The change compared to the value observed in the previous *Report* is explained by an easing of variables related to the debt and the foreign exchange markets.

Global financial conditions, as measured by the IMF's financial conditions index, deteriorated, particularly in April. In advanced economies, the adjustment was more pronounced due to increased market volatility and wider corporate debt yield spreads. In contrast, movements in emerging countries were more moderate, although elevated financing costs persist.[19]

Graph 30

Financial Conditions Index[1/,2/]

Standard deviations



Data as of May 2025.

Source: Banco de México.

1/ For a description of the methodology see Box 2: Financial Conditions and Growth Risk, Financial Stability Report, December 2019.

2/ The contributions of each FCI variable are estimated using Kalman Filter.

[19] See IMF Global Financial Stability Report, April 2025, chapter 1, available here.

The main results of the Systemic Risk Perception Survey,[20,21] are described below. Among the most frequently cited external financial risks were: a deterioration in global economic growth prospects, higher than expected inflation and protectionist policies, and a weakening of trade agreements. Regarding internal financial risks, the most commonly mentioned was deterioration in the country's economic growth outlook, followed by a downgrade in the sovereign credit rating and a deterioration in public finances. As for non-financial risks, the most cited were political, geopolitical and social risks, cybersecurity risks and technological risks, and insecurity and violence. Finally, there was an increase in the percentage of institutions that identified a deterioration in both global and domestic economic growth prospects as a risk, compared to the previous survey (Table 1).

Table 1

Main sources of financial system risks Percent of total institutions		
	May-25[1/]	Nov-24[2/]
External financial risks		
Deterioration of global economic growth outlook	80	74
Higher than expected inflation	71	78
Protectionist measures and the weakening of trade agreements	68	48
Deterioration of foreign market conditions*	66	53
Disorderly changes in foreign interest rates	63	64
Domestic financial risks		
Deterioration of the domestic economic growth outlook	75	70
Deterioration of sovereign credit rating	71	70
Deterioration of public finances	67	65
Higher than expected inflation	64	63
Fiscal, financial and economic policies	54	45
Non-financial risks		
Political, geopolitical and social risks	89	88
Cybersecurity and IT risks	88	90
Violence and insecurity	75	77
Climate risk	68	78
Deterioration of the rule of law and impunity	55	65

1/ In the last survey 112 institutions participated.
2/ In the previous survey 110 institutions participated.
* Exchange rate volatility, depreciation and lack of liquidity.

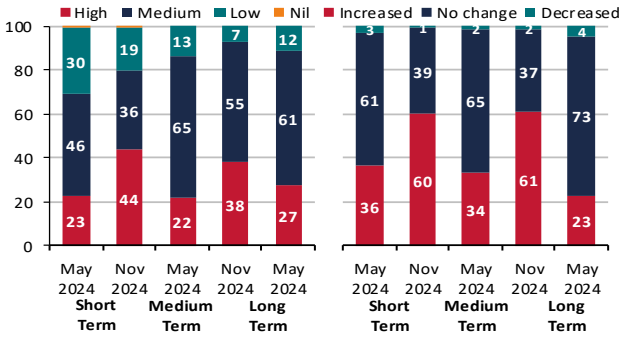
In the section of the survey regarding the likelihood of an event affecting financial stability in the short, medium and long-term,[22] responses showed there was an increase in the proportion of institutions that consider the probability of such an event occurring in the medium term to be high, compared to the previous semester. Additionally, the proportion of institutions that believe the probability remained unchanged, increased for all time terms (Graph 31).

[20] The survey is conducted by Banco de México among risk management directors of various financial institutions. This six-month survey was conducted from April 22 to May 12, 2025. For more information see Box 6 "Semiannual Systemic Risk Perception Survey", from the Financial Stability Report, December 2019.

[21] The survey consists of a series of questions grouped into four blocks: i) main sources of financial (internal and external) and non-financial risks; ii) the perception of the materialization of a high impact event that could affect the proper development of the financial system in different terms; iii) the expectations that institutions have regarding the main idiosyncratic risks they face; and iv) aspects related to their risk management. The survey was sent to 136 financial institutions (afores, insurance companies, commercial banks, development banks, broker-dealers and investment funds), where 112 institutions responded.

[22] Short, medium and long-term should be understood as a horizon of 0 to 6 months, 6 to 12 months and 1 year or more, respectively. Institutions were asked whether the probability of materialization was high, mean, low or zero for each time horizon.

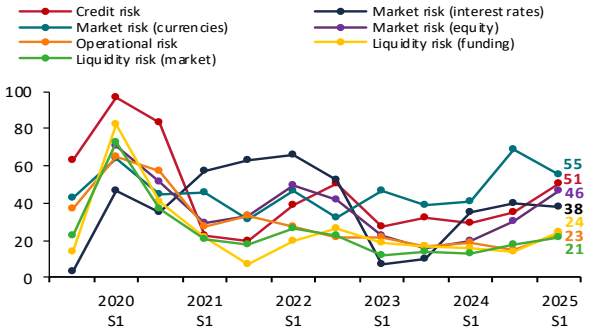
Graph 31
Probability of occurrence of a Systemic Event
Percentage of responses [1/]



Source: Banco de México.
1/ Certain figures may not add up to 100% due to rounding up.

Regarding the institutions' expectations for the evolution of financial risks over the next six months, an increase is anticipated in credit, market (equity instruments), operational, funding liquidity and market liquidity risks. In contrast, interest rate and currency market risks are expected to decrease (Graph 32).

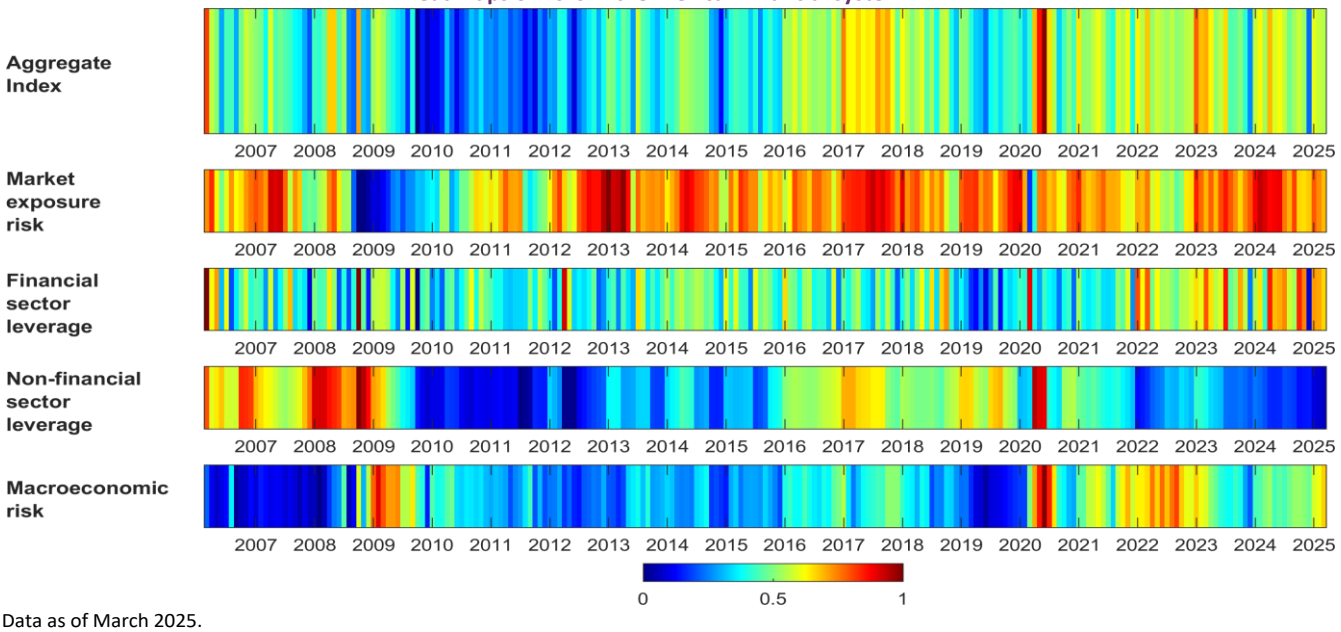
Graph 32
Expectations regarding the evolution of risks in the following six months [1/]
Percent



Data as of May 2025.
Source: Banco de México.
1/ The chart shows the difference between the percent of institutions that expect the risk to increase and the institutions that expect the risk to decrease.

Aggregate risk of the financial system, illustrated through the heat map, increased slightly. Risks related to market exposure and leverage in the non-financial sector decreased. In contrast, financial sector leverage and macroeconomic risks increased in this period (Graph 33).

Graph 33
Heat maps of risks in the Mexican financial system[1/ 2/]



Data as of March 2025.
Source: Banco de México.
1/ Refer to Box 3 for a description of the methodology: Mexican Financial System Risks Heat Maps, Financial System Report 2018. The Exposure to Markets category relates to the Risk Appetite category of the Financial System Report 2018.
2/ The disaggregated map is provided in Annex 1.

Box 4: Trade Policy Uncertainty and the Financial Markets Stress Index

I. Introduction

Uncertainty negatively affects economic and social decisions by inducing consumers and companies to postpone consumption and investment. This reduces demand, generates price volatility and decreases the traded quantities of goods and services (Baker et al., 2016).

According to specialized literature, over the past decade, uncertainty related to U.S. trade policy has caused economic disruptions that have contributed to a decline in global output in different periods (Barattieri and Cacciatore, 2023) and have also affected the performance of financial markets (Rao et al., 2025; de Nicola et al., 2020; Itakura, 2020).

Trade uncertainty affects the financial situation of companies, their investment policies and operations (Chauhan and Jaiswall, 2023; Gulen and Ion, 2016; Julio and Yook, 2012). These factors in tandem with supply and demand conditions determine the payment capacity and default risk of companies. Hence, trade uncertainty is a factor that influences the risk appetite of commercial banks (Ge et al., 2021) and, consequently, this affects the supply of credit to companies (Hu et al., 2024). [1] Moreover, a major source of trade uncertainty is the frequent variation in trade tariff levels by the U.S. government on its trading partners in both 2018 and 2025.

Empirically, there are two main challenges in measuring the impact of trade policy and its uncertainty on financial market stability. First, trade policy requires measurement and this is obtained by estimating an index that captures and quantifies it. Second, the relationship between trade policy uncertainty and financial market stability must be modeled with a method that allows to analyze whether different levels of trade policy uncertainty have a differentiated impact on financial market stability. A limitation of text-based uncertainty indices is that they do not explain how uncertainty affects asset volatility or valuation (David and Veronessi, 2022) and thus the stress of financial markets. The International Monetary Fund (IMF, 2025) provides a discussion of the transmission channels between trade uncertainty and financial markets developments.

This box analyzes the impact of uncertainty associated with U.S. trade policy on the stress of financial markets. To this end, an analysis of the relationship between the U.S. Trade Policy Uncertainty Index (TPUI) by Baker et al. (2016) and the Financial Markets Stress Index (FMSI) of the United States (Federal Reserve Bank of St. Louis, 2025) and Europe (Holló et al., 2012) was performed, and a differentiated impact was found between the first and the others. The results indicate that an increase in the TPUI is associated with an increase in stress indices and that the relationship between trade uncertainty and the level of stress in financial markets is non-linear. In particular, in the case of Mexico, it is found that for high TPUI values, the relationship is positive and statistically significant and of lesser magnitude than for low values. In the case of the United States and Europe, the relationship between high TPUI values and the level of stress in the financial markets is inverted and a negative relationship is obtained.

This analysis contributes to a better understanding of the uncertainty surrounding current U.S. trade policy. This includes how it is characterized and measured, as well as its impact on the stability of various financial markets, as reflected in their respective stress indices.

II. Description of the U.S. TPUI

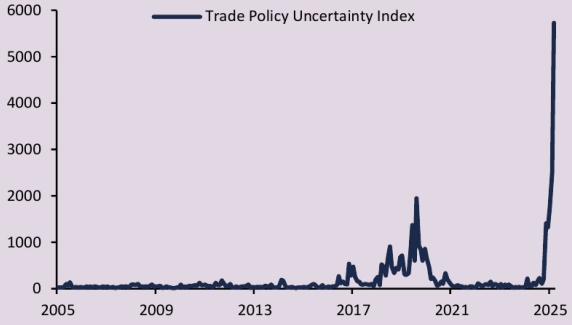
This study uses the U.S. TPUI developed by Baker et al. (2016). The TPUI is a sub-index derived from the Economic Policy Uncertainty index (*EPU*) for a trade category. It reflects the frequency of articles in U.S. newspapers that discuss economic uncertainty related to trade policy or include one or more references to trade policy. It is an index based exclusively on data obtained from news stories, using as input the *Access World News* database, which contains more than 2,000 U.S. newspapers. The sub-index requires the identification and measurement of

[1] For example, Correa et al. (2023) study the 2018-2019 period and document that an increase in trade policy uncertainty is associated with a decrease in the supply of bank credit for all U.S. companies regardless of the level of uncertainty.

four types of terms classified as: economic, uncertainty, political and a fourth type associated with specialized trade policy terms. [2]

The TPUI is a metric that has virtues and disadvantages: the main virtue is that it is a very useful index for identifying the occurrence of an event (Handley and Limao, 2022). Thus, the TPUI increases for specific events such as the negotiation of the North American Free Trade Agreement (NAFTA) and its value decreases as the event is no longer of interest. A disadvantage is that the TPUI does not measure the impact of events. Hence, for example, it is not possible to conclude that the TPUI remains at lower levels because of NAFTA. Another disadvantage is that this index does not necessarily reflect the expectations of decision makers of the relevant companies. The TPUI depends on whether the use of uncertainty-related terms in news sources is congruent with how agents use them to form their expectations. Finally, indices obtained from text analysis such as the TPUI, rely primarily on the time variation of the index.

Graph 1
Monthly evolution of the TPUI
No units



Data as of March 2025.
Source: Banco de México.

Graph 1 presents the monthly evolution of the TPUI for the period from January 2005 to March 2025 (i.e., 243 observations). It is shown that the TPUI rose in 2016 and reached a peak in 2019, then decreased and returned to its pre-2016 levels. The TPUI increased its value again at the end of 2024 and reached its maximum value during 2025.

III. Data and methodology

A monthly sample covering the period from January 2005 to March 2025 was used for this analysis. An Autoregressive Threshold Model (Tong, 1983) known as *Threshold-AR* (TAR, its acronym in English) was used to distinguish high from low values of the TPUI as follows:

$$TPUI = \begin{cases} \alpha_1 + \beta_1 TPUI_{t-1} + \varepsilon_t, & si\ TPUI_{t-1} < \gamma \\ \alpha_2 + \beta_2 TPUI_{t-1} + \varepsilon_t, & si\ TPUI_{t-1} \geq \gamma \end{cases}$$

Where:

$TPUI_t$ is the value of the TPUI at time t, γ corresponds to the threshold value above which the TPUI is considered to take a high value; α_i and $\beta_i i = 1,2$, are regime-dependent parameters (low and high); and ε_t represents the error term. The conditional least squares technique was used for estimation. The estimated value for γ was 335 and corresponds to the 89th percentile of the historical TPUI distribution.

In principle, a positive relationship is expected between the TPUI and the FMSI, as well as with the other analyzed stress indices. However, it is also expected that higher values of the TPUI will be associated with even higher values of the stress indices. This is because a higher level of uncertainty is associated with an even higher level of stress in the financial markets, which introduces convexity to the model. Consequently, a non-linear model is used in the explanatory variables.

Based on the high uncertainty threshold value of the TPUI, an econometric model was estimated to identify the different impact of episodes with high and low values of the TPUI on Mexico's FMSI, as well as on the stress indices for the United States and for Europe. The econometric representation is as follows:

[2] The first three types are used to construct the EPU, while the fourth is used additionally to construct the TPUI. The trade policy terms used as keywords are: "import tariffs", "import duties", "import barriers", "government subsidies", "government subsidy", "WTO", "World Trade Organization", "trade treaty", "trade agreement", "trade policy", "Trade Act", "Doha Round", "Uruguay Round", "GATT", and "dumping". The subscript is normalized and multiplied to have a mean of 100 from 1985 to 2010.

$$ln(y_{j,t}) = \lambda_{0,j} + \lambda_{1,j} ln\,(x_t) + \lambda_{2,j} ln\,(x_t) D_t + \lambda_{3,j} D_t + \varepsilon_{j,t}$$

where $y_{j,t}$ is the monthly stress index scaled in the [0,1] interval of the financial market for country j : Mexico ($j = 1$), United States ($j = 2$), and Europe ($j = 3$) in t; x_t is the value of the TPUI of the United States in time t; D_t is a dichotomous variable that takes the value 1 if $IIPC_t \geq 335$ and 0 otherwise. In addition, $\lambda_{i,j}$, for $i = 0,1,2,3$ and $j = 1,2,3$, are constant parameters over time.

In principle, it is posited that the relationship between the Financial Markets Stress Index and the TPUI is contemporaneous. This is because markets are assumed to react immediately to U.S. trade policy news. It is also assumed that trade policy is exogenous and that it is linked to the political cycle and not necessarily to the business cycle, especially in boom times.

IV. Results

Table 1 presents the estimated parameters for the variables of interest. In addition, Graphs 2, 3 and 4 show the scatter plots with the fitted regression line for each model, differentiating between the two regimes of trade policy uncertainty, (i.e., those associated with high and low values of the TPUI). As expected, the slope coefficient is positive and statistically significant at the 1% level in all three cases. There is a positive association between the TPUI and the Mexican Financial Markets Stress Index, as well as for the other indices. The value of the slope coefficient shows that the association is strongest for Europe, followed by Mexico, and weakest for the United States. Furthermore, the interaction coefficient is negative and statistically significant at the 1% level for Mexico and the United States, while for Europe it is statistically significant at the 10% level. These results suggest that there is a non-linear relationship between the TPUI and the respective stress index for at least two of the three indices (Table 1). However, Table 2 shows that, when the coefficient of the slope is added to the interaction, the sum is statistically different from zero only in the case of Mexico.

Table 1
Financial Market Stress Index

Variable	Mexico	USA	Europe
Ln TPUI	0.3862*** (0.0856)	0.2605*** (0.0803)	0.5051*** (0.1639)
Interaction	-0.2774*** (0.1010)	-0.4039*** (0.1348)	-0.6665* (0.3588)
Dichotomous	1.4882*** (0.5002)	1.9487** (0.7838)	2.2456 (2.2450)
Constant	-2.9237*** (0.3441)	-3.5163*** (0.3161)	-4.4109*** (0.6342)
Observations	242	242	242
R-squared	0.216	0.042	0.059
F-Statistic	55.27***	4.096***	7.767***

Note: Robust standard errors in parentheses. Statistically significant at 1% (***), 5% (**), 10% (*). The null hypothesis of the F statistic is: Ho:$\lambda_0=\lambda_1=\lambda_2=\lambda_3=0$, while the alternative is Ha: At least one $\lambda_i \neq 0$.

Table 2
Test for the sum of slope and interaction term coefficient

Variable	Mexico	USA	Europe
Sum of coefficients	0.1088	-0.1434	-0.1614
F statistic (1,238)	4.11**	1.75	0.26

Note: Statistically significant at 1% (***), 5% (**), 10% (*). The null hypothesis of the F statistic is: Ho:$\lambda_1+\lambda_2=0$, while the alternative is Ha:$\lambda_1+\lambda_2 \neq 0$.

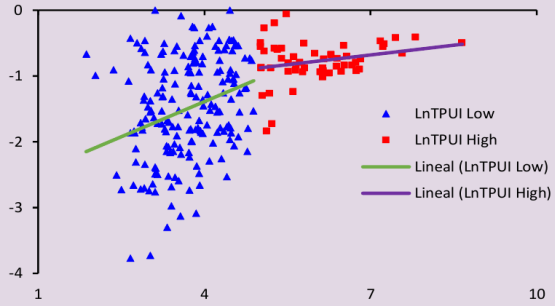
The results are consistent with the conjecture that financial markets incorporate the relevant information during periods when the TPUI reaches high levels, thereby discounting the likelihood that the policies associated with those extreme levels will actually materialize impacting the stress index due to higher economic risks, and thus resulting in a positive but lower slope for Mexico, or even negative for the United States and Europe. A factor that can also explain this is if the trade policy shock occurs at the beginning of the month. In this case, markets initially react, but subsequently adjust as the information is priced in, causing the stress index to revert to previous levels by the end of the month. This affects the monthly recorded level of the index.

As a robustness test, a quadratic model was estimated for the three countries. The results show that this specification fits well for the United States and Europe, whereas for Mexico the spline linear model is more appropriate. These findings suggest a non-linear relationship between the TPUI and the Financial Markets Stress Index, although the magnitude of the effect varies depending on the analyzed country or region.

Graph 2

Scatter plot: Mexico

Horizontal axis LnTPUI | Vertical axis LnFMSI

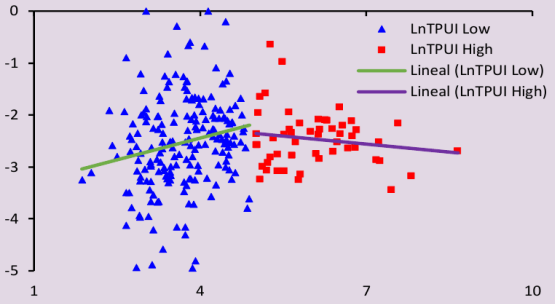


Data as of March 2025.
Source: Banco de México .

Graph 3

Scatter plot: U.S.

Horizontal axis LnTPUI | Vertical axis LnFMSI_U.S.

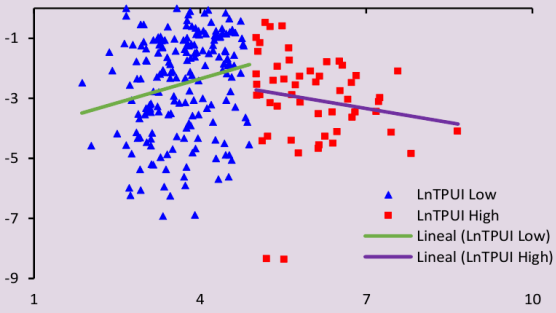


Data as of March 2025.
Source: Banco de México.

Graph 4

Scatter diagram: Europe

Horizontal axis LnTPUI | Vertical axis LnMFSI_EUR



Data as of March 2025.
Source: Banco de México.

V. Final considerations

The analysis of the relationship between the TPUI with Mexico's FMSI, and the stress indices of the United States and Europe, shows that higher levels of the TPUI are not necessarily associated with higher levels of stress in the financial markets. In fact, there is a threshold for the TPUI above which the relationship with the U.S. and European stress indices is not statistically different from zero, whereas for Mexico the magnitude of the relationship remains positive at a decreasing rate. This indicates that there is a non-linearity between the trade policy uncertainty indicator and financial markets stress. Moreover, it also shows that there is heterogeneity depending on the geographic region under consideration. Furthermore, as expected, it was found that Mexico's Financial Markets Stress Index is the most sensitive to changes in U.S. trade policy. Interestingly, when TPUI reached extreme values, then the impact of its level increasing furthermore was lower relative to the low-level regime for Mexico whereas for the United States and Europe it is reversed. This situation will be analyzed in detail in future work.

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Macro-financial vulnerabilities index

Early warning indicators are metrics used to identify macro-financial vulnerabilities in an economy.[23] The timely detection of imbalances is facilitated by these metrics, which in turn allow for the monitoring of areas of fragility. In the event of adverse circumstances, these areas of fragility could lead to a macro-financial crisis.[24]

Early warning indicators are calculated across four sectors: financial, real, external and public.[25] The values in all cases are below their respective thresholds (Graph 34). This finding suggests that no significant macro-financial vulnerabilities are currently detected and that the country remains resilient in the face of a possible adverse economic environment.

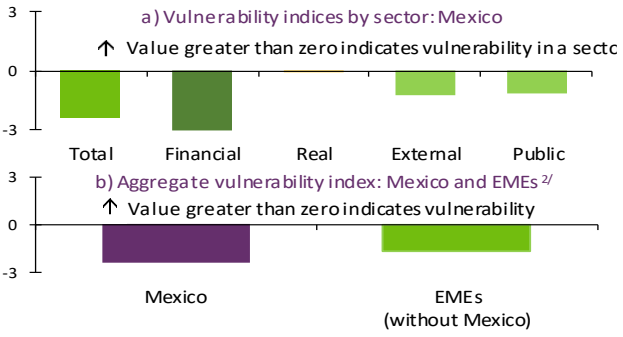
[23] These instruments are used by national authorities and international financial organizations, such as the International Monetary Fund (IMF) or the Financial Stability Board (FSB). For example, see the IMF (2012) Methodological Manual *Strategy, Policy, and Review Department. The IMF-FSB Early Warning Exercise: Design and Methodological Toolkit*.

[24] The following are considered to be macro-financial crises: sudden capital outflows, financial stress and abrupt fiscal adjustments. The definitions from the 2012 IMF Methodological Manual definitions are used for sudden capital outflows and abrupt fiscal adjustments, while the definitions by 2012 Laeven and Valencia are used for financial stress.

[25] Eleven variables are used as indicators for emerging economies, based on the latest available data: current account balance, reserve coverage, export growth, real effective exchange rate, fiscal balance, change in government revenues, capitalization index (CAR), return on assets (ROA), nonperforming loans ratio (NPL ratio), loan-to-deposit ratio and real GDP growth. The aggregate indicators are obtained by calculating the weighted average of the distance of each indicator with respect to a threshold, taking into account the importance of each variable in predicting crisis.

Graph 34

Macro-financial vulnerability indices[1/]



Data as of April 2025.
Source: Banco de México, Haver Analytics, IMF (World Economic Outlook and Financial Soundness Indicators).
1/ An index value of 0 indicates that the vulnerability threshold has been reached. Negative values imply lower vulnerability, while positive values indicate higher vulnerability.
2/ The group of emerging market economies includes Brazil, Colombia, Indonesia, the Philippines, South Africa, Thailand, and Türkiye.

Since the last publication of this *Report*,[26] there has been an improvement in the indicators of the public and external sectors, being more pronounced in the case of the public sector. The observed improvement in this sector is mainly due to the expectation of a more balanced fiscal position by the end of 2025, and, to a lesser extent, to the projected increase in tax revenues. In the external sector, the improvement is primarily attributed to an increase in the reserve coverage ratio.

In regard to the financial sector, the indicator shows similar levels to those of the previous *Report*. This sector remains the most resilient within the Mexican economy, a feat attributable to capitalization levels (CAR), loan-to-deposit ratio, and return on assets (ROA) that remain considerably below their respective risk thresholds.

In the real sector, a deterioration is observed. This is due to a downward revision in the growth expectation of the Mexican economy.

In order to obtain a comprehensive view of vulnerabilities as a whole, an aggregate indicator is developed that synthesizes information from the country's four sectors. The value of this aggregate indicator shows an enhancement in comparison with the preceding *Report* (Graph 34). Furthermore, while the aggregate indicator for other emerging economies (EMEs) also demonstrated improvement, Mexico continues to exhibit a lower aggregate level of macro-financial vulnerabilities.

To interpret these results, it is important to consider the fact that macro-financial crises are not generally triggered by isolated vulnerabilities, but rather by the simultaneous accumulation of vulnerabilities across multiple sectors of the economy. Moreover, the probability of a crisis materializing is contingent not solely on internal vulnerabilities but also on the magnitude and nature of the adverse shocks that the economy might encounter.

IV.2. Financial position of households, companies and public sector

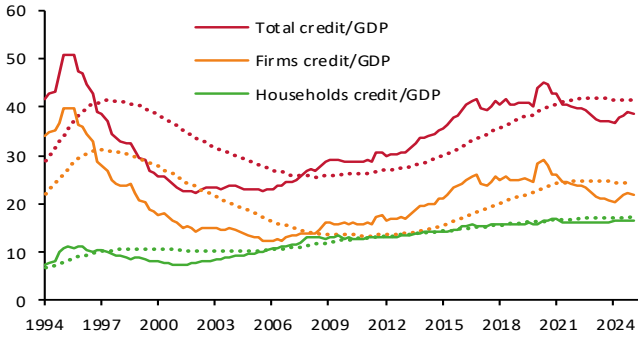
The financing gap has remained at negative levels for three and a half years; additionally, during the last quarter its trend has changed and this gap has widened to 2.9 percentage points of GDP (Graph 35b). Credit as a proportion of GDP is at similar levels to those of 2016, and the financing gap at 2006 levels (Graph 35a).

Graph 35

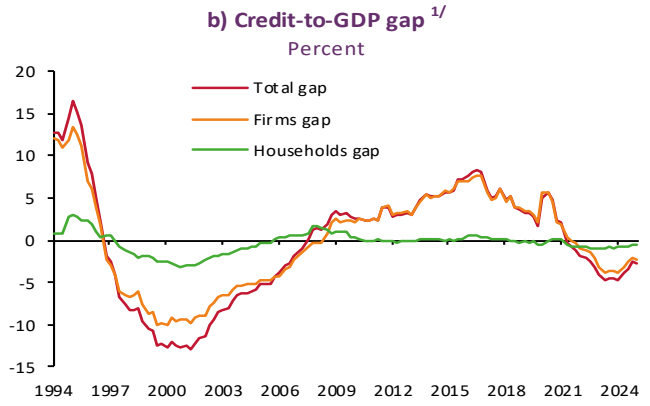
Credit to non-financial system private sector [1/]

a) Share of GDP

Percent



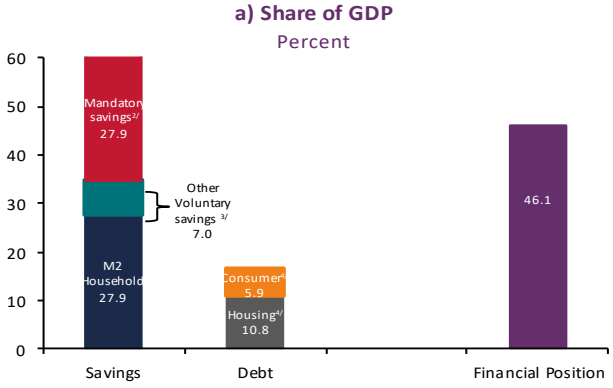
[26] The Financial Stability Report - December 2024 addressed vulnerabilities in 2024 and, therefore, to the macro-financial stability of 2024. Conversely, the present *Report* refers to vulnerabilities in 2025 and, by extension, the macro-financial stability of 2025.

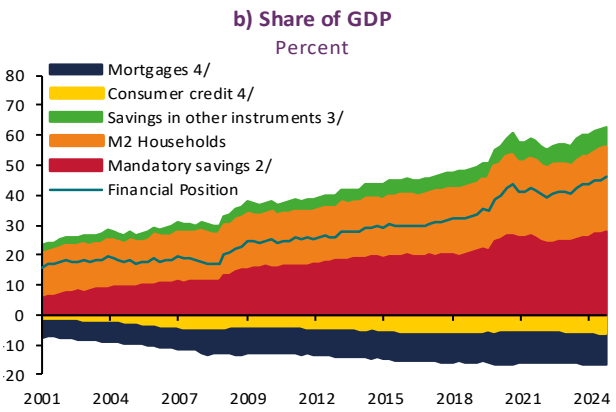


Data as of March 2025.
Source: Banco de México.
1/ It's the difference between observed credit-to-GDP ratio and its long term trend.

The financial position of households increased compared to last semester. This was mainly due to an increase in mandatory savings and, to a lesser extent, an increase in M2 held by households (Graph 36a). Savings reached a peak level, exceeding those in the last semester (Graph 36b).

Graph 36
Households financial position 1/





Data as of March 2025.
Source: Banco de México.
1/ Totals may not add up to 100% due to rounding. Share of four quarters average nominal GDP.
2/ Includes housing and pension funds.
3/ Includes public securities, private securities, issued by states, municipalities, OyEs and Fonadin, as well as other banks liabilities held by households.
4/ Includes credit granted by commercial banks, development banks, non-bank savings and loans entities, credit unions and regulated financial companies.

During the first quarter of 2025, total financing to the Mexican economy increased in real annual terms, reaching a level of 101% of GDP at the end of March. About 58 percentage points (pp) corresponded to the public sector, 21 pp to non-financial companies and the rest to households (consumption and housing). Financing to the public sector increased, mainly due to debt issuance in both domestic and international markets, and has increased its share of total financing granted by domestic sources; in contrast, the non-financial private sector reduced its share of total financing. As for total financing granted by the external sector to the non-financial private sector (companies), it increased and gained share of total financing. Among domestic sources of financing to the non-financial private sector, both direct credit and securities issuance increased in the first quarter of the year; with direct credit showing stronger growth than in the same period a year earlier. In the case of external sources of financing, the balance of financing in foreign currencies continued to contract (Table 2).

Table 2

Total Financing to Non-Financial Sectors of the Mexican Economy						
a) Figures at March 2025						
	Thousands of million Mexican Pesos	Per cent of sector	Per cent of GDP	Real annual percent change [Real annual percent change of balance is USD]		Per cent of financing denominated in Mexican pesos
				1Q25 vs 1Q24	1Q24 vs 1Q23	
Public sector [1/]	**19,946**	**100**	**57.6**	**13.2**	**3.3**	**73.6**
Securities	**17,088**	**85.7**	**49.3**	**13.9**	**5.8**	**77.7**
Issued in Mexico	13,274	66.6	38.3	10.2	10.8	100.0
Issued abroad	3,814	19.1	11.0	29.0 [8.3]	-10.7 [1.8]	0.0
Bank credit	**1,596**	**8.0**	**4.6**	**7.3**	**-6.8**	**5.1**
Commercial bank	152	0.8	0.4	11.4	12.4	54
Development bank	1,075	5.4	3.1	-4.1	-5.5	92
Foreign banks	370	1.9	1.1	59.9 [34.3]	-20.2 [-9]	0.0
Other [2/]	**1,261**	**6.3**	**3.6**	**11.6**	**-11.2**	**42.8**
Private sector	**13,255**		**38.3**	**8.3**	**1.2**	**77.4**
Non-financial companies	**7,423**	**100**	**21.4**	**11.1**	**-1.6**	**60.0**
Securities	**2,324**	**31.3**	**6.7**	**11.3**	**-7.5**	**35.1**
Issued in Mexico	786	10.6	2.3	4.1	9.2	98.4
Issued abroad	1,538	20.7	4.4	15.4 [-3.1]	-14.9 [-3.1]	2.7
Bank credit	**4,857**	**65.4**	**14.0**	**11.6**	**1.0**	**72.3**
Commercial bank [3/]	3,704	49.9	10.7	11.3	2.2	73.8
Development bank	534	7.2	1.5	9.0	3.1	61.3
Foreign credit [4/]	620	8.3	1.8	15.9 [-2.7]	-7.7 [5.2]	0.0
Other [5/]	**242**	**3.3**	**0.7**	**1.4**	**7.6**	**98**
Households	**5,832**	**100**	**16.8**	**4.9**	**4.9**	**100**
Consumer credit	**2,089**	**35.8**	**6.0**	**10.9**	**11.2**	**100**
Commercial bank [3/]	1,756	30.1	5.1	13.5	11.4	100
Development bank	46	0.8	0.1	-4.5	0.1	100
Other [5/]	**287**	**4.9**	**0.8**	**-0.4**	**11.6**	**100**
Mortgages	**3,743**	**64.2**	**10.8**	**1.8**	**2.0**	**100**
Commercial bank	1,472	25.2	4.2	3.0	3.9	100
Development bank	11	0.2	0.0	-6.2	-8.0	100
Other [6/]	**2,260**	**38.7**	**6.5**	**1.1**	**0.9**	**100**
Memo: Non-regulated financial entities that grant financing by destination sector [7/]	**1,889**	**100**	**5.5**	**11.9**	**0.5**	**89.0**
Non-financial companies	1,392	73.7	4.0	13.8	-2.8	87.4
Consumer credit	455	24.1	1.3	6.9	11.9	95.4
Mortgages	21	1.1	0.1	3.0	16.6	100.0
Public Sector	21	1.1	0.1	4.9	-18.0	42.8
Memo: Crowfunding financing [8/]	1.0	n.d.	0.0	7.2	12.5	n.d.
TOTAL	**35,091**		**101.3**	**11.2**	**2.4**	**75.9**

Data as of March 2025.

Source: Banco de México (CF 297), CNBV, SHCP, Condusef and BMV.

Note: in order to use comparable data in annual growth figures, they exclude loans from non-regulated entities for which data is not available, as they are in debt restructuring or liquidation processes.

1/ Considers the gross debt balance of the public sector, using SHCP methodology. Public sector financing includes that received by the Federal Government, public agencies and enterprises, and the development bank. As a source of financing, it also includes lending granted by the development

2/ Includes financing granted by international financial institutions, Pidiregas, the SAR savings fund, obligations of ISSSTE, Pemex, and CFE, among others.

3/ Includes the portfolios of regulated sofomes due to their equity links with banking institutions.

4/ Excludes financing from foreign suppliers.

5/ Includes financing granted, to the respective receiving segment, by Infonavit (to companies through developer loans and to households through housing loans) and by Infonacot (consumer loans), as well as by regulated non-banking financial entities such as socaps, sofipos, regulated sofomes that

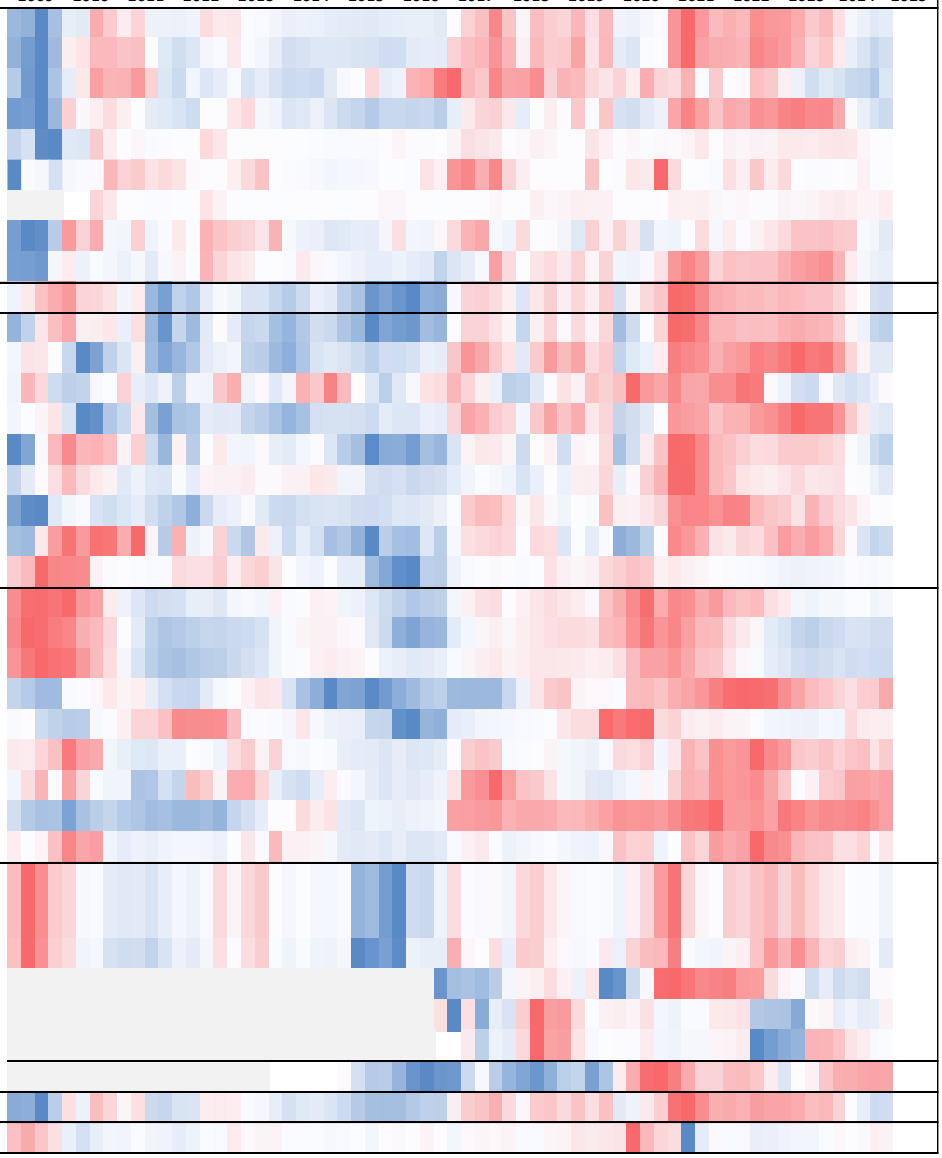
6/ Includes financing granted by Infonavit, Fovissste, as well as by regulated non-banking entities.

7/ Includes financing granted by non-regulated sofomes, corporate debt issuers engaged in granting financing (e.g., automotive), credit granted by listed department stores to their customers, and, in the case of private non-financial companies, financing from suppliers (only listed companies). A new series with preliminary figures is presented as of June 2023, resulting from corrections made to the data reported by non-regulated sofome

8/ Includes the financing flow over the last two quarters granted by crowdfunding institutions authorized by CNBV.

Total Financing to Non-Financial Sectors of the Mexican Economy

b) Historical figures: percentil of the distribution of the real annual percent change



Data as of March 2025.

Source: Banco de México (CF 297), CNBV, SHCP, Condusef and BMV.

Note: The heat map shows the percentiles of the distribution of the real annual growth rate of financing. The highest percentiles are shown in blue and the lowest in red. The color of each indicator or row is based on the history of each series, which covered from March-07 to March-25, with the exception of those shown in gray, whose history is not available. In addition, in order to use comparable data in annual growth figures, they exclude loans from non-regulated entities for which data is not available, as they are in debt restructuring or liquidation processes.

1/ Considers the gross debt balance of the public sector, using SHCP methodology. Public sector financing includes that received by the Federal Government, public agencies and enterprises, and the development bank. As a source of financing, it also includes lending granted by the development bank.

2/ Includes financing granted by international financial institutions, Pidiregas, the SAR savings fund, obligations of ISSSTE, Pemex, and CFE, among others.

3/ Includes the portfolios of regulated sofomes due to their equity links with banking institutions.

4/ Excludes financing from foreign suppliers.

5/ Includes financing granted, to the respective receiving segment, by Infonavit (to companies through developer loans and to households through housing loans) and by Infonacot (consumer loans), as well as by regulated non-banking financial entities such as socaps, sofipos, regulated sofomes that issue debt, bonded warehouses, and credit unions.

6/ Includes financing granted by Infonavit, Fovissste, as well as by regulated non-banking entities.

7/ Includes financing granted by non-regulated sofomes, corporate debt issuers engaged in granting financing (e.g., automotive), credit granted by listed department stores to their customers, and, in the case of private non-financial companies, financing from suppliers (only listed companies). A new series with preliminary figures is presented as of June 2023, resulting from corrections made to the data reported by non-regulated sofomes.

8/ Includes the financing flow over the last two quarters granted by crowdfunding institutions authorized by CNBV.

IV.2.1. Households

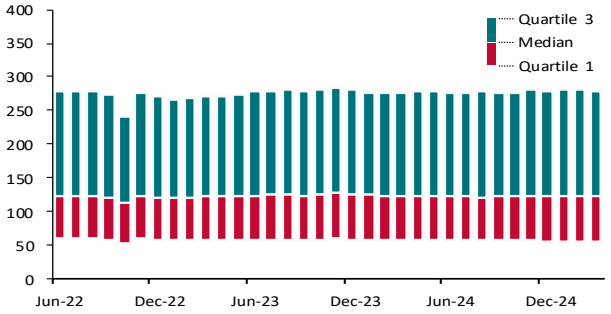
Borrowers' total debt balances, at constant prices, have remained at the same levels over the last two quarters (Graph 37a). The leverage distribution, measured as the proportion of monthly income allocated to debt repayment, remained at similar levels to those reported a year earlier, with a higher level of leverage among lower-income borrowers (Graph 37b).

Graph 37

Distribution of leverage of a sample of households

a) Outstanding debt amount of borrowers with at least one bank loan [1/,2/]

Thousands of pesos

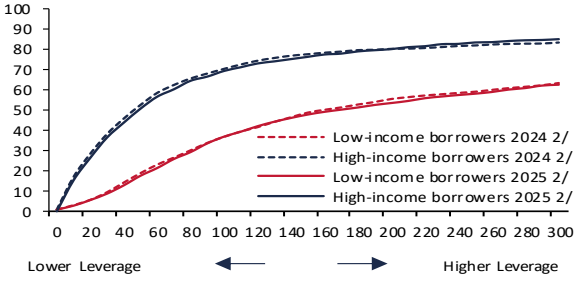


Data as of March 2025.
Source: Credit Bureau.
1/ Estimate using information from a sample of Credit Bureau files.
2/ Constant prices (March 2025 base).

b) Monthly payments to monthly income ratio of borrowers with at least one bank loan [1/]

Vertical axis: percent of accumulated loans' amount

Horizontal axis: monthly payments as a percentage of income reported



Data as of March 2025.
Source: Credit Bureau and Banco de México.
1/ Estimate using information from a sample of Credit Bureau files.
2/ "Low-income borrowers" and "high-income borrowers" are considered as those whose income is lower than the median income and greater than median income, respectively.

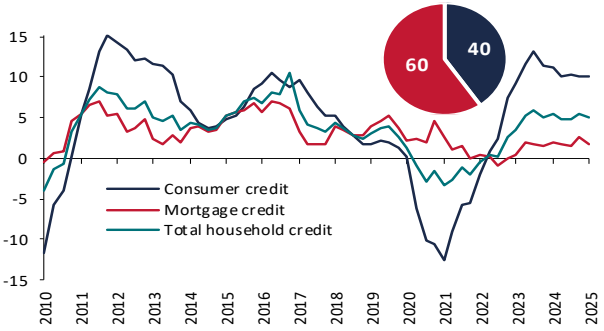
Consumer credit

Total financing to consumers showed significant annual real growth, albeit lower since the previous *Report* (Graph 38). The banks and related sofomes consumer portfolio balance grew in real annual terms at a rate of 10.8% in March, slightly lower than that recorded since the previous *Report*. Growth was observed in all segments, mainly in auto loans, mainly driven by the dynamism of auto loan sales (Graph 39).[27]

Graph 38

Household credit growth [1/]

Real annual percent change



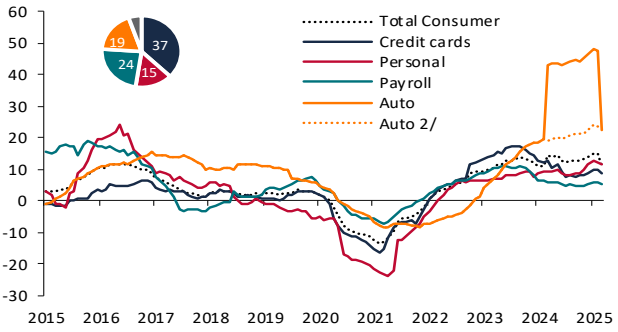
Data as of March 2025.
Source: Banco de México, BMV and Condusef.
The percentages shown here take into account figures related to non-regulated entities that grant financing and that are included in the footnote of Table 3 (Memo); therefore, they differ from those recorded at the top of the same table. In addition, figures exclude the loan balances of non-regulated entities for which data is not available at the end of the period due to ongoing restructuring or liquidation processes, in order to maintain a consistent basis for growth comparisons.
1/ Includes the loan portfolio of commercial banks and regulated non-bank entities such as regulated sofomes, socaps, sofipos and credit unions, as well as non-bank non-regulated entities such as non-regulated sofomes and debt-issuing financial companies such as financial leasing companies or financial arms of automotive companies. For mortgages it also includes those granted by Infonavit and Fovissste and for consumer credit includes credit granted by Infonacot. The growth series is adjusted to account for the initial availability of financing data for non-regulated entities and regulated sofomes that issue debt, for the period in which they are included in the sample (2015–2016). A new series with preliminary figures is presented, resulting from corrections made to the information reported by non-regulated sofomes as of June 2023.

[27] The increase in the real annual growth rate of the automotive portfolio from March 2024 to February 2025 was due to a base effect caused by the acquisition of a sofomes portfolio by a banking institution in March 2024.

Graph 39

Consumption portfolio of the banking system[1/]

Real annual change in percent



Data as of March 2025.
Source: CNBV.
1/ Includes sofomes regulated for having equity links with a bank.
2/ Change excluding the impact of the sofom acquired by a banking institution in March 2024.

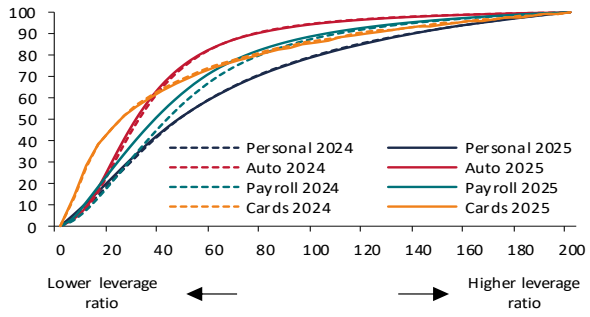
Household financing granted by the non-bank sector as a whole accelerated slightly since last *Report*. However, growth for regulated and non-regulated sectors was heterogeneous: on the one hand, regulated sofomes for issuing debt and finance companies registered a slowdown in their financing, reaching negative real rates with respect to the balance recorded a year earlier; growth increased slightly in the case of the total financing granted through department stores credit cards during the same period. Auto loan financing by non-banking financial intermediaries as a whole, slowed significantly mainly driven by a reduction in the balance of the portfolios of financial companies that grant auto loans.

of Commercial banks borrowers having consumer credit[28] recorded a shift towards lower financial burden levels in the payroll credit portfolio from February 2024 to February 2025. For the rest of the segments, financial burden remained at similar levels during this period (Graph 40).

Graph 40

Household leverage ratio by type of consumer bank credit

Vertical axis: Percent of cumulative portfolio
Horizontal axis: Household leverage ratio as a percentage of income reported



Data as of February 2025
Source: Banco de México

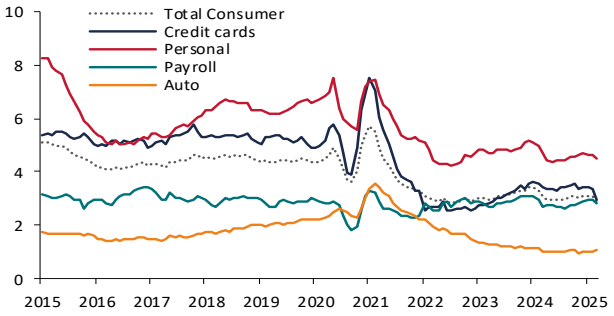
The non-performing loan ratio of the commercial banks and related sofomes consumer loan portfolio decreased compared to the previous *Report*. This reduction is mainly explained by the balance decrease observed in the credit card segment, whose non-performing loan ratio (NPL ratio) declined due to a higher volume of write-offs in March. Considering the write-offs within the non-performing loan ratio (Adjusted NPL ratio), the indicator remains at similar levels compared to the previous *Report*. It is also noteworthy that the Adjusted NPL ratio level for most consumer segments is lower than the average level recorded during 2012-25, except for the payroll loans segment (Graph 41a and Graph 41b).

Graph 41

Non-performing loan ratio and adjusted non-performing loan ratio of consumer loan portfolio[1/]

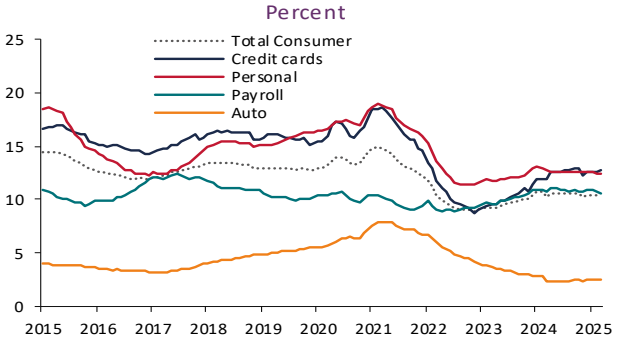
a) Non-performing loan ratio

Percent



[28] The financial burden is measured as the proportion of income that goes to cover the payment due on all loans that an individual has registered with credit bureaus. This analysis is performed using the income information available in the regulatory reports for revolving and non-revolving consumer bank loans.

b) Adjusted non-performing loan ratio



Data as of March 2025.
Source: CNBV.
1/ Includes sofomes regualted for having equity links with a bank.

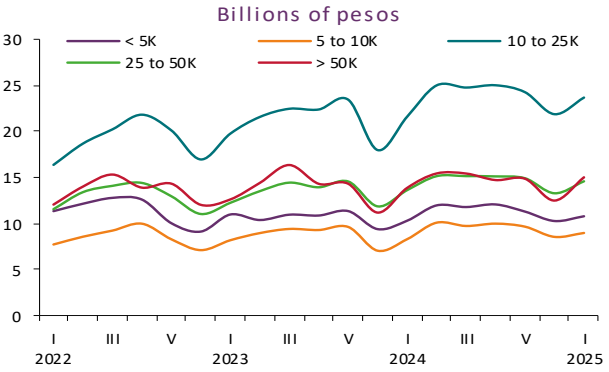
In a context in which the domestic economy performed weakly during the end of 2024, consumer credit continued to expand. In particular, during the last two bimesters of 2024 and the first of 2025, card and personal loans showed greater dynamism than in previous bimesters, while payroll loans exhibited a similar behavior.

The personal loans growth was the result of the dynamism observed loan granting for most borrowers' income levels, although it was more noticeable among borrowers with higher incomes (Graph 42b). As for borrowers with lower incomes, their use of credit cards increased (Graph 43).

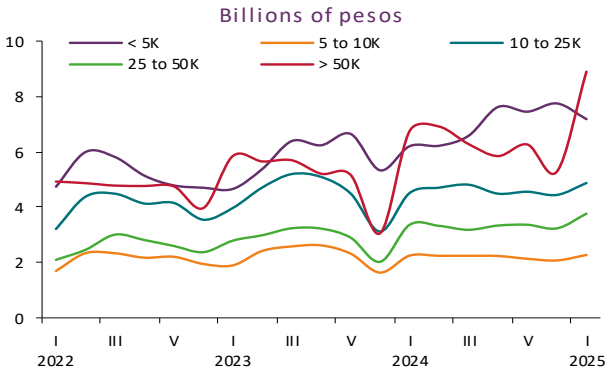
Graph 42

Newly granted loans according to borrower income [1/2/]

a) Payroll



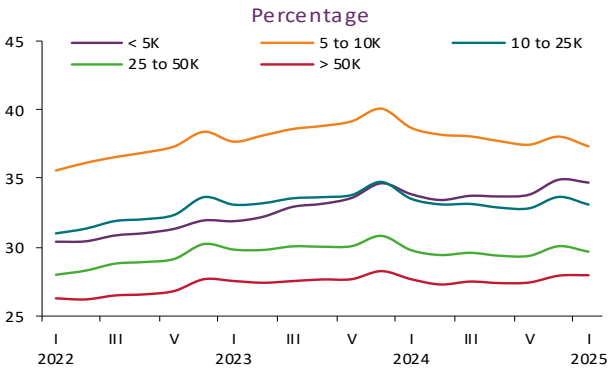
b) Personal



Data as of first two-month period 2025.
Source: Banco de México.
1/ Includes banks loans and linked sofomes loans.
2/ Gross monthly income in pesos.

Graph 43

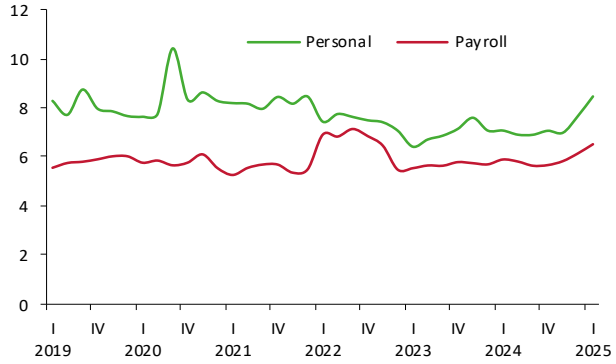
Use of credit card lines according to borrower income [1/2/]



Data as of first two-month period 2025.
Source: Banco de México.
1/ Includes banks loans and linked sofomes loans.
2/ Gross monthly in pesos.

Although personal loans and payroll credit portfolios' probability of default increased in the sixth bimester of 2024 and the first bimester of 2025 (Graph 44), their levels are still moderate and reflect increases in loans granted mainly by banks classified as associated with commercial chains (BACC) and those classified as Domestically Important Banks (BISL). The probability of default on credit card loans remained at similar levels to those observed in the fourth bimester of 2024.

Graph 44
Probability of regulatory default for newly personal and originated payroll loans 1/
Percentage



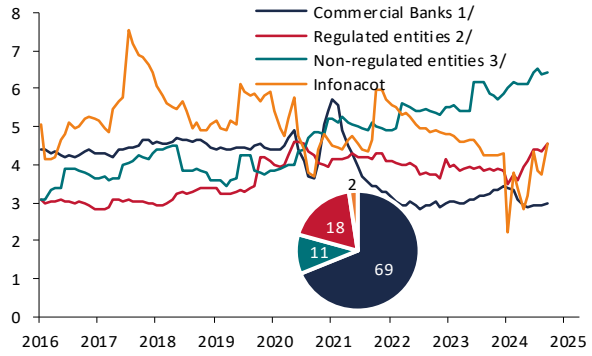
Data as of first two-month period 2025.
Source: Banco de México.
1/ Includes banks loans and linked sofomes loans.

Thus, while the level of risk in the consumer portfolio remains low, Banco de México will remain attentive to its evolution.

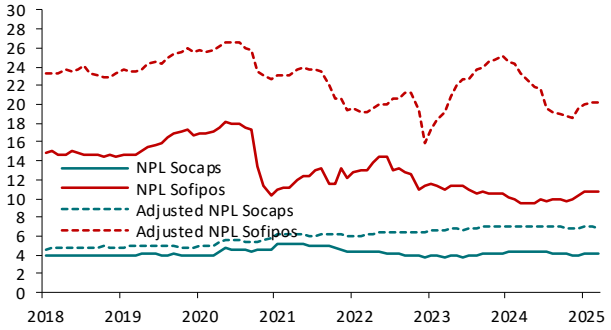
The non-performing loan ratio of the of the consumer loan portfolio granted by non-banking financial intermediaries as a whole increased slightly since the last *Report* (Graph 45a), while that of National Fund for Employee Consumption (Infonacot, its acronym in Spanish), decreased. Non-performing loans in the sofipos sector increased slightly due to a higher past-due portfolio, despite an increase in write-offs and portfolio write-offs, as can be seen when comparing their Adjusted non-performing loan ratio (NPL ratio) (Graph 45b). Such write-offs occur regularly in some entities in the sector that grant credit through credit cards.

For sofipos, the amount of write-offs and write-downs during the last six months amounted to 8.8% of the average balance of the total consumer portfolio during the period.[29] In addition, borrowers with lower income were found to have higher non-performing loan ratios and financial burden, suggesting a deterioration and higher credit risk in the sector. In the socaps sector, although write-offs are also made, they are carried out less frequently.

Graph 45
Non-performing Loan Ratio of Consumer Loan Portfolio
a) By entity type
Percent



b) Of regulated entities
Percent



Data as of March 2025.
Source: Banco de México (SIE), CNBV, BMV and Condusef.

1/ Includes the loan portfolio of regulated sofomes having an equity linked with a bank, whether subsidiaries of the latter or not.

2/ Includes the credit portfolios of the development bank and of non-banking regulated financial intermediaries, such socaps, sofipos and sofomes regulated for issuing debt and the Infonacot.

3/ Includes credit portfolio of non-regulated sofomes, debt-issuing financial companies such as financial leasing companies or financial arms of automotive companies, as well as credit cards granted by listed department stores. The Credit Bureau is the information source of the non-performing loan ratio for department stores credit cards. A new and improved time series for non-regulated sofomes is now shown from June 2023 onwards due to corrections made by entities on their data submisions.

[29] Thirty-four percent of these write-offs correspond to loans granted to borrowers who repurchased below the median monthly income distribution.

Box 5: Determinants of default in revolving consumer loans

I. Introduction

Credit risk is related to the potential losses that a financial institution may incur in the event of default by its debtors. For a banking institution, it is a very relevant risk, since its materialization generates losses that may damage its solvency and generate imbalances in the stability of the financial system. The consumer loan portfolio represents one of the segments with the highest risk of default for banks in Mexico, since it is the one with the highest non-performing loan ratio (NPL ratio) in recent years.[1] In particular, the segment of credit cards granted to individuals not only stands out for its substantial share within the total consumer portfolio (37% as of Mar-25), but also for its high levels of non-performing loan ratios, defaults and write-offs (Dreschler et al. (2025)).[2] This is due, on the one hand, to the fact that it is generally unsecured, and on the other, to the characteristics and risk of this type of borrower. Moreover, the relatively high non-performing loan ratio is not exclusive to Mexico.[3]

This Box seeks to identify the characteristics of revolving consumer credit that have the greatest predictive power on the default of this portfolio. For this purpose, a logistic regression-based predictive machine learning model is employed (see Çallı and Coşkun (2021) and Costa et al. (2020)), which includes sociodemographic variables, variables related to the cardholder's payment behavior, and intrinsic credit characteristics.

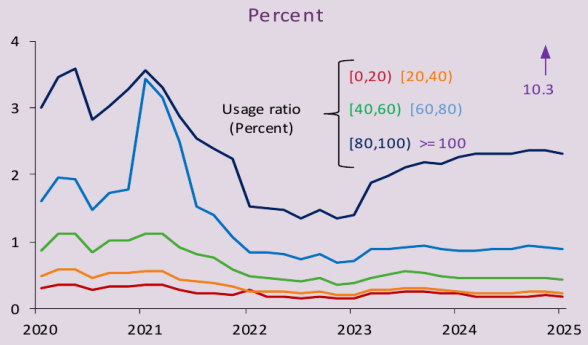
The results of the model indicate that the credit line usage ratio is the variable that has the greatest explanatory power in credit card defaults between February 2024 and February 2025. Thus, borrowers with high debt balances with respect to their credit limit were the most likely to default. Other variables with a lower impact were the minimum payment required in relation to the borrower's monthly income (*PTI*),[4] the payment made, the credit limit, as well as those related to the cardholder's characteristics such as length of service with the bank, gender, marital status, employment status and income level.

II. Empirical evidence for Mexico

In the revolving bank credit, the usage ratio, defined as the credit balance used by the borrower as a proportion of the credit limit, has historically shown a close relationship with default. For example, higher non-performing loan ratios are observed for cardholders who have made greater use of their credit limit over time (Graph 1). Likewise, cardholders with lower credit limits have higher non-performing loan ratios than those with larger lines of financing (Graph 2).

Graph 1

Non-performing loan ratio of credit cards by usage ratio



Data as of February 2025.

Source: Internally made through data provided by Bank of Mexico

[1] For example, as of February 2025, the commercial portfolio had an Adjusted non-performing loan ratio of 1.62%, the mortgage portfolio of 2.87% and the consumer portfolio of 3.08%. Source: CNBV.

[2] The consumer portfolio consists of revolving credit (credit cards) and non-revolving credit (auto loans, personal loans, payroll loans, and loans for the acquisition of consumer durables (ABCD)). The credit card portfolio represented 8.2% of the total bank portfolio as of March 2025. Source: CNBV.

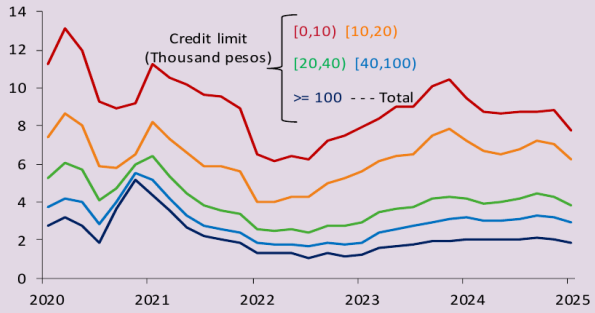
[3] For example, this is the case in the U.S., where the non-performing loan ratio of the credit card portfolio (3.08% as of December 2024) is the highest of all the portfolio segments granted by commercial banks in that country. Source: Federal Reserve Bank of St. Louis.

[4] Payment to Income.

Graph 2

Non-performing loan ratio of credit cards by credit limits

Percent



Data as of February 2025.

Source: Internally made through data provided by Bank of Mexico

III. Literature review

The analysis of credit default has been a relevant topic in the risk management literature. For example, Costa et al. (2020) identified that variables determined at credit underwriting, such as interest rate and agreed term, showed a significant contribution to the probability of default, while Masyutin (2015) found that some sociodemographic variables -such as the borrower's marital status- were relevant, although their predictive power may vary according to the population analyzed. Haughwout et al. (2024) explain that, based on information from the New York Federal Reserve consumer portfolio, a high credit utilization rate is associated with an increase in default. Meanwhile, Ma (2020) uses an ensemble model based on decision trees to identify the variables that best predict default, and finds a strong relationship between the probability of default and customers with high levels of indebtedness on their cards relative to their income.

IV. Information used and methodology

For the present analysis, we used information from Banco de México's regulatory reports on revolving consumer loans of commercial banks and their sofomes, corresponding to February 2025, which, in turn, twelve months earlier reported a current status.[5] Based on the previously documented empirical evidence and the availability of variables in the regulatory forms, the explanatory variables of the model were selected and classified into three categories: 1) characteristics of cardholder payment behavior (the usage ratio,[6] the payment made, the *PTI*, the payment required to avoid interest costs and the remaining term of the credit[7]), 2) cardholder characteristics (gender, marital status, employment status, their monthly income and the borrower's length of service with the bank) and 3) credit characteristics (the credit limit and the interest rate).

Default is modeled through a dichotomous variable associated with each loan, defined as follows:

$$y_{i,t} = \begin{cases} \mathbf{1}, & \text{if credit } i \text{ defaulted} \\ & \text{within the previous 12 months to } t \\ \mathbf{0}, & \text{in any other case} \end{cases}$$

The credit default probability is studied using a logistic regression model with the following econometric specification:

$$log\left(\frac{p_{i,t}}{1-p_{i,t}}\right) = \boldsymbol{X}'_{\boldsymbol{i,t-12}}\boldsymbol{\beta} + \boldsymbol{\varepsilon}_{i,t}$$

where $p_{i,t} = P(y_{i,t} = 1)$ is the probability that the loan i has defaulted in any of the 12 months prior to the cutoff data set (Feb-25) and $\boldsymbol{X}_{\boldsymbol{i,t-12}}$ represents the vector of explanatory variables associated with the loan reported 12 months prior to the cutoff date (Feb-24). For purposes of implementation and estimation, a loan is in the default status if it is classified as "Stage 3"[8] according to the accounting criteria of the bank in the time horizon analyzed (Feb-24 to Feb-25).

For model estimation, a supervised machine learning approach was used,[9] and a model similar to Costa et al. (2020) was applied to predict cardholder defaults and estimate a default probability. This approach consists of randomly dividing the sample into a training set (with 80% of the total observations) and a test set (with 20% of the total observations). The training set was used to estimate the regression

[5] Loans in current status are considered to be in "Stage 1" according to the accounting criteria for banks (Annex 33 of the CUB).
[6] The usage ratio refers to the credit balance used by the borrower as a proportion of its credit limit.
[7] Measured by the number of months in which the loan would repay if the borrower only made its minimum payment.
[8] Revolving loans should be recognized in "Stage 3" when the repayments have not been completely settled in accordance with the agreed terms and are 90 days or more past due (Annex 33 of the CUB).
[9] Supervised learning involves the implementation of a statistical model for the prediction or estimation of a target variable based on a set of explanatory variables (James, et al., 2021).

coefficients through the maximum likelihood method,[10] while the test set was used to evaluate the model fit. The metrics used to assess such fit were two: *accuracy,*[11] defined as the percentage of correct predictions (i.e., the default status suggested by the model matches what was observed), and the area under the receiver operating characteristic *(ROC)* curve,[12] which relates the rate of true positives and the rate of false positives in the classification. This approach allows for a more robust validation of the model in terms of its out-of-sample predictive ability, in contrast to a conventional estimation where the model is fitted and evaluated on the same sample. Finally, once the model coefficients were estimated, they were standardized in order to facilitate their interpretation and identify those variables that have greater explanatory power in the model.[13]

V. Main results

Table 1 describes the results of the logistic regression, as well as the model's goodness of fit. It shows that the usage ratio is the variable that contributes most to the probability of credit card default: its standardized coefficient is the largest in magnitude and is statistically significant at 1%. To validate this fact, a univariate model was estimated with the usage ratio as the only explanatory variable, and it was found that the level of prediction of this model is very similar to that of the multivariate model. Furthermore, the sign of the coefficient is positive, indicating that there is a positive relationship between this variable and the probability of default. This result is consistent with that reported by Haughwout et al. (2024) in the U.S. economy. Other variables that explain the probability of default and that were found to be significant are *PTI*, payment made and credit limit, which is similar to that found by Ma (2020). It also highlights that cardholder characteristics were significant, although with a smaller marginal effect on the probability of default. Among the characteristics analyzed, it is identified that the probability of default is lower when the cardholder has greater length of service with the bank, if the cardholder is a woman or if the cardholder is married; while the probability of default increases if the borrower is not a salaried employee. These results are consistent with Masyutin (2015), who found empirical evidence suggesting that sociodemographic variables influence the predictability of credit default. As a robustness test, we estimated the model for other time periods and obtained results consistent with those reported in Table 1. [14]

Finally, and in order to strengthen the results, the predictive power of the models was evaluated using the two fit metrics mentioned in the previous section (Table 1 and Graph 3). The results show that the predictive power of the models is high and consistent with that reported by Khandani et al. (2010) and Yash et al. (2023).[15]

[10] Woldridge (2010) points out that probit and logistic regression models are suitable for binary variables, and that the maximum likelihood method is suitable for nonlinear estimation of their parameters.

[11] A classification threshold of 50% was used.

[12] See Hanley, J. A., & McNeil, B. J. (1982). The true positive rate is when the model predicts default and it occurs, while the false positive rate is when the model does not predict default and default occurs. It is desirable to have a high true positive rate and a low false positive rate, i.e., a high value of the area under the ROC curve.

[13] Standardization of the estimated coefficients is a common practice in this type of methodology. Here it was done through the relationship between the standardized coefficient and the unstandardized coefficient and the standard deviations of the dependent variable and the corresponding exogenous variables (Menard, 2010).

[14] The exercise was repeated with information from 2022, 2023 and 2024, and consistent and qualitatively comparable results were found.

[15] This study used 42 credit bureau variables, transactionality data and client deposit account data. Within these variables there are matches with those used here, except for the credit term and interest rate, as well as client characteristics.

Table 1
Logistic regression model for credit card defaults

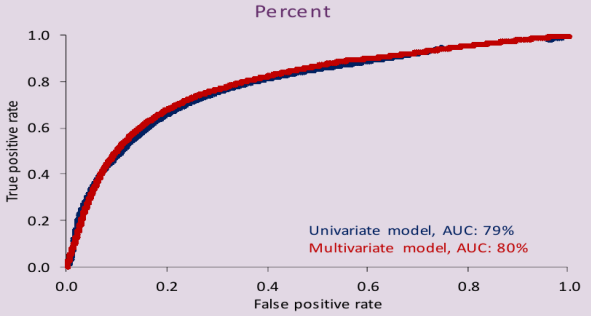
Variables[1/]	Univariate	Multivariate
Payment behavior:		
Usage ratio	0.50***	0.38***
PTI		0.15***
Payment required to avoid interest costs		0.09***
Payment made		-0.17***
Remaining credit term		-0.03***
Credit characteristics:		
Credit interest rate		0.03***
Credit limit		-0.06***
Cardholder characteristics:		
Borrower's monthly income		0.01***
Indicator that takes the value of 1 if the borrower is a self-employed		0.01***
Length of service with the bank		-0.06***
Indicator that takes the value of 1 if the borrower is a woman		-0.03***
Indicator that takes the value of 1 if the borrower is married		-0.02***
Number of observations[2/]	2,321,768	2,321,768
Accuracy	72%	73%
Area under the *ROC* curve	79%	80%

1/ The variables were ordered from lowest to highest for those with negative standardized coefficient and from highest to lowest for those with positive standardized coefficient.

2/ Number of records in the training base, after a subsampling implemented to maintain an equal proportion of observations in the classes of the default variable. The test base, used to evaluate the model fit, was not sub-sampled. The total records considering both bases (11,772,683 loans) represent 37% of the total outstanding revolving loan portfolio as of Feb-24.

Note: ***, **, and * represent statistical significance at 1%, 2.5%, and 5%.

Graph 3
ROC curve and area under the curve (AUC) of the univariate and multivariate models



Data as of February 2025.
Source: Internally made through data provided by Bank of Mexico

VI. Final Considerations

The credit balance used by the cardholder as a proportion of his or her credit limit is the main variable explaining the probability of default in bank credit cards in Mexico between February 2024 and February 2025. In particular, borrowers with a high usage ratio were the most likely to default. Other variables that affect the probability of default are: the payment-to-income ratio, the payment made, the credit limit, and those related to cardholder characteristics such as length of service with the bank, gender, marital status, and whether the cardholder is self-employed or not.

The results highlight the importance of constant monitoring of this indicator to assess the potential deterioration in credit risk of bank credit cards and its possible impact on financial stability. Due to this, Banco de México will continue to monitor its evolution and explore the relationships it may have with other credit and borrower characteristics.

Additionally, future work will study the determinants of the probability of default for credit cards issued by non-bank financial institutions, as well as for those of other sub-segments of the consumer portfolio.

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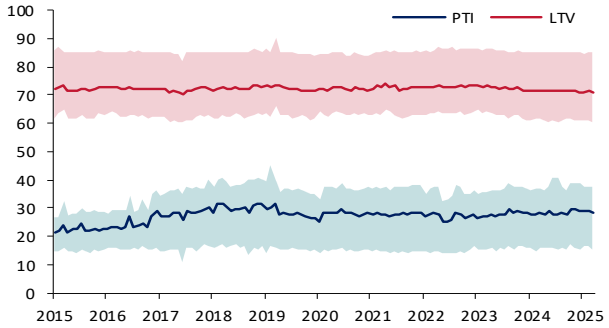
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Mortgage loans

Total housing financing recorded slightly higher growth than in the previous *Report*. By type of lender, commercial banks and their related sofomes, as well as Infonavit, showed stronger growth compared to September. Infonavit's housing portfolio showed a slight spike due to higher loan origination activity during the second half of 2024 and the first months of 2025. In contrast, Fovissste's total housing portfolio registered a contraction as of March 2025.

Regarding bank lending for home purchases, the ratio of Loan to Value (LTV) of mortgage loans remained relatively stable during the *Report* period. Meanwhile, the proportion of income allocated to the monthly payment (*Payment-To-Income or PTI*) of mortgage loans registered a marginal increase, due to a lower average income and, to a lesser extent, to a higher average monthly payment reported during the referred period (Graph 46).

Graph 46
Loan-To-Value (LTV) and Payment-To-Income (PTI) of Mortgage Loans [1/, 2/]
Percent

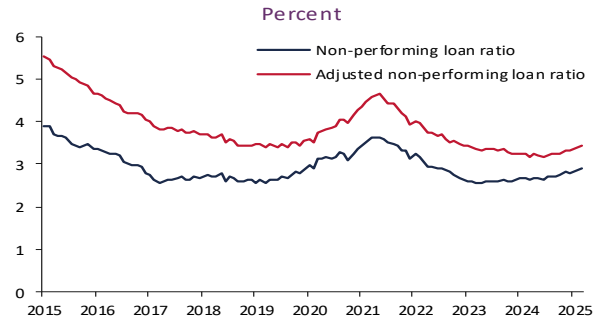


Data as of March 2025.
Source: CNBV.
1/ Recently-granted commercial bank mortgage loans.
2/ The shaded area represents the interquantile range of the respective metric.

The non-performing loan ratio of the bank housing loan portfolio continued its upward trend, which began in October 2023. The above behavior is also observed in the Adjusted NPL ratio, which started to increase since the second quarter of 2024. This increase in non-performing loan ratios was mainly observed in loans with a high LTV, as well as in loans with a higher value in their underlying homes. Nevertheless, current levels of NPL ratios and adjusted NPL ratios are at historically low levels (Graph 47).

Graph 47

Non-performing loan ratio and adjusted non-performing loan ratio on bank mortgage loans 1/

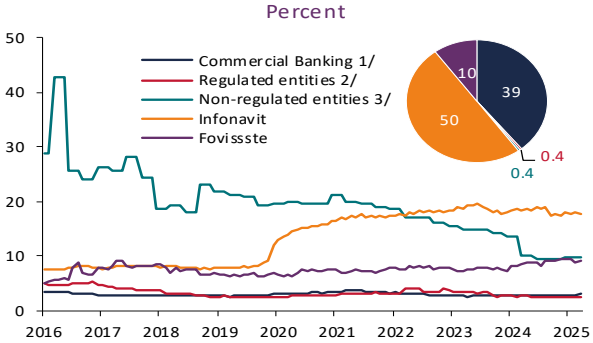


Data as of March 2025.
Source: CNBV.
1/ Total commercial bank mortgage loans.

The non-performing loan ratio of Infonavit's housing portfolio increased slightly, while that of Fovissste decreased marginally. For both institutions, this indicator continues at high levels in relation to their historical performance (Graph 48).

Graph 48

Non-Performing Loan Ratio of Mortgage Portfolio



Data as of March 2025.

Source: Banco de México (SIE), CNBV, BMV and Condusef.

1/ Includes the loan portfolio of regulated sofomes having an equity linked with a bank, whether subsidiaries of the latter or not.

2/ Includes the credit portfolios of the development bank and of non-banking regulated financial intermediaries, such socaps, sofipos and sofomes regulated for issuing debt.

3/ Includes credit portfolio of non-regulated sofomes and financial corporations. A new and improved time series for non-regulated sofomes is now shown from June 2023 onwards due to corrections made by entities in their data submisions.

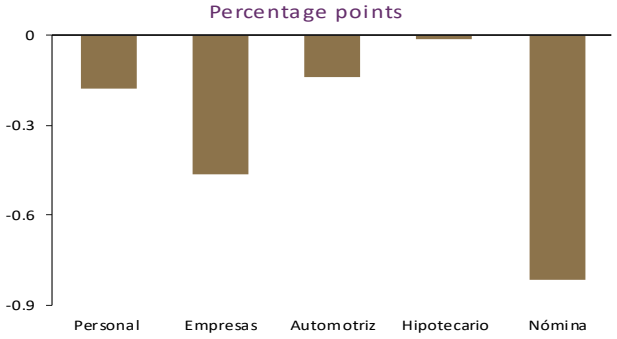
Decomposition of change in non-performing loan ratios and gender

On a global scale, women encounter more obstacles when attempting to access credit compared to men.[30] For women, the selection process for obtaining credit tends to be more stringent, which suggests that those who do obtain financing generally exhibit lower defaults rates under comparable credit conditions (Graph 49). Therefore, this section analyses the annual variation of the non-performing loan ratio in different loan portfolios, distinguishing between women and men.[31]

The annual change in the non-performing loan ratio is explained by three components: 1) the increase in the participation of women within each loan portfolio, since, given their lower credit delinquency compared to men, their greater presence reduces the average portfolio non-performing loan ratio (*participation effect*); 2) the changes in the observed non-performing loans of women and men over the period, keeping their share constant in each portfolio (*behavioral effect*); and 3) the differences in financing conditions that affect non-performing loans, regardless of the gender of the borrower (*composition effect*).

Graph 49

Difference between the delinquency rate (NPL) of women and men according to the credit portfolio 1/



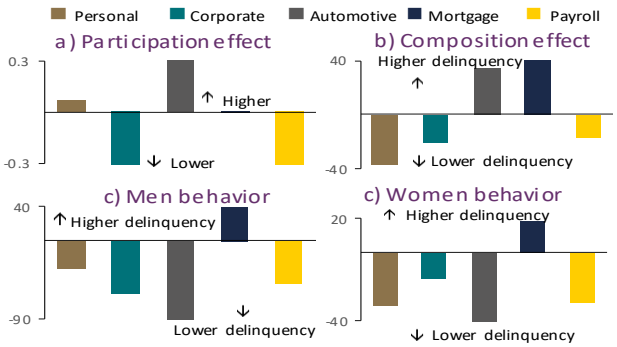
Data as of December 2023.
Source: Banco de Mexico.
1/ December 2023 is considered the initial period for the analysis.

[30] Box 3 of the *Financial Stability Report-June 2024* explores whether the gender gap in credit widens or narrows in the face of uncertainty. Academic evidence supports this discussion: Buvinic and Berger (1990) highlight structural and social barriers that limit women's access to credit. Mascia and Rossi (2017) point to greater difficulties in obtaining bank financing for European SMEs, while Ongena and Popov (2016) evidence lower approval rates for women entrepreneurs. See also Demirgüç-Kunt et al. (2013).

[31] In corporate credit, the analysis focuses on natural persons with business activity, for which the gender can be identified.

Female participation increased in three of the five portfolios analysed, contributing to a reduction in non-performing loan ratios through the *participation effect* in one more segment than in the previous *Report* (Graph 50a). In the payroll portfolio, this *effect* recorded its fifth consecutive contribution to the decrease in the non-performing loan ratio since the beginning of its measurement. In the corporate portfolio, female participation also grew significantly. This contributed to a marked decline in defaults, as women in this segment show considerably lower non-performing loan ratios than men. This credit delinquency gap, in conjunction with the historically low rate of female participation in corporate credit suggests the possible existence of entry barriers. In addition, female participation also increased in the mortgage loan portfolio this time around, although a more limited extent. Looking ahead, a primary challenge will be to enhance the involvement of women in the other portfolios, personal and automotive loans, and to solidify recent progress in the mortgage and corporate loan segments, where women's participation has traditionally been low.

Graph 50
Change in credit delinquency distinguishing between men and women



Source: Banco de Mexico.

Note: Difference in delinquency index (NPL) between December 2023 and December 2024. Negative values imply downward pressure on delinquency.

The *behavioral effect* contributed to lowering non-*performing* loan ratios in all portfolios, except for mortgages, as credit defaults declined for both women and men in personal, corporate, payroll and automotive loans. The auto loans demonstrated the most significant decrease in non-performing loan ratios for both genders, which could be attributed to a higher share of recently issued loans within this portfolio, and to the fact that these types of loans tend to exhibit the lowest default rates (Graph 50c). In contrast, in mortgages, credit delinquency increased for all borrowers, which may be associated with the slowdown in the employment among higher-income workers, who belongs to the highest share in this segment. Meanwhile, the *composition effect* contributed to a reduction in non-performing loan ratios for personal, payroll, and corporate loans, largely driven by a decrease in financing costs, standing out with the case of personal loans (Graph 50b).

Box 6: What factors determine the differences in financing conditions between women and men?

I. Introduction

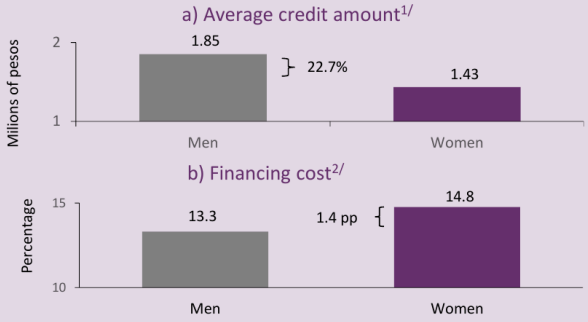
Access to better financing conditions for women benefits both economic growth and financial stability. When women obtain credit on better terms, they can smooth consumption, invest, and grow their businesses, which increases their contribution to the growth of the economy.[1] In addition, larger loan amounts or lower financing costs facilitate the creation of new companies led by women, which promotes the creation of new jobs, encourages competition among companies, and ultimately fosters economic development.[2]

Likewise, better financing conditions for women strengthen financial stability. On average, women have lower default rates, so their access to more favorable credit conditions helps reduce non-performing loan ratios.[3] They also face different risks than men, for example, they are more vulnerable to unemployment in some sectors, but they also benefit more from the greater receipt of remittances.[4] Thus, women's access to credit not only expands their productive opportunities but also helps banks diversify their loan portfolios.[5]

However, in practice, women face less favorable credit conditions worldwide, including higher interest rates and smaller loan amounts. In Mexico, these disparities also exist and are especially present in credit to sole-proprietorships, where female participation is low and financing conditions are less favorable. On average, new loans granted to women have 22.7% lower amounts and interest rates are 1.4 percentage points higher than new loans granted to men (Graph 1). Based on international evidence, these disparities between women and men could not only be widening the gender gaps in the country, but also limiting economic development in Mexico.

Graph 1

Characteristics of new loans granted by commercial banks to sole-proprietorships, distinguishing between men and women



Source: Banco de Mexico and CNBV.

1/ Average amount, in millions of pesos, of new loans granted by commercial banks to sole-proprietorships.

2/ Average interest rate, as a percentage, of new loans granted by commercial banks to sole-proprietorships.

This box therefore analyzes the differences in financing conditions between women and men. In particular, it examines the extent to which these differences can be explained with all the information available to Banco de México. This information—such as the size and sector of a company, its geographic location, its credit history, or whether or not collateral is provided—determines part of the credit risk, regardless of the gender of the person leading a company. Therefore, this information also helps to understand to what extent gender gaps in financing conditions are explained by identifiable and measurable factors and that, in an objective manner, affect credit risk.

The other part of the differences in financing conditions between women and men, which cannot be explained with this information, relates to other factors that are either unknown to us, subjective, or difficult to measure, even when all available information is used. This part of the gender differences is referred to in the labor market

[1] Morazzoni and Sy (2022) find that improving financing conditions for women would allow for a more efficient allocation of capital, which could be directed toward the most profitable companies.

[2] Chiplunkar and Goldberg (2024) show that facilitating women entrepreneurs' access to credit would boost competition among companies, strengthening the productivity and dynamism of the economy.

[3] Perrin and Weill (2022) show that there is a negative relationship between the gender gap in access to credit and financial stability. That is, when women have less access to credit compared to men, the stability of the financial system is affected.

4 Box 3 "Remittances, retail deposits and gender" of the June 2022 Financial Stability Report highlights the role of women's receipt of remittances in the gender gap and in the financial inclusion of this sector of the population.

[5] Heres, et al. (2024) show that part of the remittances women receive goes to debt repayment.

literature as the "unexplained or conditional gender gap." Thus, this box seeks to estimate the unexplained or conditional gender gaps with respect to two of the most important conditions of business credit in Mexico: loan amounts and interest rates.

II. Measuring gender gaps in the labor and credit markets

As in the more traditional labor market literature,[6] the literature on the credit market focuses on two dimensions that reflect the quantities and prices observed once supply and demand are balanced. The quantity dimension refers to the average amount of credit obtained by women and men, while the price dimension refers to the costs of financing, reflected in the interest rates of credit.

Studies usually calculate gender gaps in two stages. First, they calculate the differences between the average amounts and interest rates for women and men; then, it is analyzed how much of the gender differences can be explained by personal and labor characteristics that affect the borrower's risk. These factors are introduced in a stepwise fashion, to see how each of them affects the initial differences between women and men. However, the main focus of the analysis is not the contribution of these variables, but the part not explained by the available information. It is this part of the differences between women and men, which cannot be explained with the available information, that is interpreted as the gender gap.

III. Methodology

To analyze the gaps in the average amount and interest rates, this box uses information on new loans granted to sole-proprietorships during January 2017-December 2024.[7] The data provide precise information on the conditions of the loans and borrowers, which allows us to construct variables on their labor and personal conditions.[8] Thus, gender gaps are estimated with the following model:

$$y_{ct} = \beta F_{c,t} + \gamma X_{c,t} + e_{c,t};$$

where y_{ct} refers to one of two financing conditions, loan amount or interest rate, of loan c during month t; $F_{c,t}$ is a variable that takes the value 1 if the loan corresponds to a female-led company, and 0 if it corresponds to a male-led one; $X_{c,t}$ is a vector of variables that reflect the risk of default; and β, the interest rate coefficient, is the one that measures the gender gap in financing conditions that cannot be explained by the whole set of variables included in the vector $X_{c,t}$.

Specifically, this vector incorporates five types of factors that are added in a stepwise manner in the specification expressed above, in the analysis of the following section. First, time fixed effects are incorporated, which allow our final estimate of the conditional gender gap to exclude the impact of the economic environment. For example, as Box 3 of the June 2024 Financial Stability Report shows, in a context with macro-financial uncertainty women tend to be more penalized in terms of their credit conditions.[9] By including the time fixed effect, the aim is to exclude this effect from the final calculation of the gender gap, since it is an effect that can be estimated with the available information. This is because what we want to know is what part of the differences between women and men cannot be explained with the available information.

Next, characteristics of the company or borrower are incorporated, such as the regulatory probability of default, its age, and the size of the company, measured by the number of employees. Characteristics of its credit history are also included as factors, such as whether it defaulted on its credit obligations any time in the past, whether it did so in the last 12 months, the length of time (in months) of

[6] Evidence shows that women entrepreneurs face less favorable financing conditions than men. Alesina et al. (2013) find that women pay more for credit, even if they are not riskier than men or have a similar credit history. Similarly, in an analysis of small and medium-sized companies in Europe, Mascia and Rossi (2017) find that female-led companies face higher financing costs, and that these decrease when leadership shifts from a woman to a man. In Turkey, Brock and De Haas (2023) show that women entrepreneurs are more often required to provide collateral, especially when the bank agent is young and inexperienced and the credit is targeted to male-dominated economic sectors.

[7] The National Banking and Securities Commission (CNBV) collects this information from banks and makes it available to Banco de México.

[8] Sole-proprietorships are the firms for which it is possible to identify the gender of the entrepreneur. Using new loans makes it possible to distinguish differences in credit conditions at the time of origination. Data on financing costs are constructed using the spread between the average loan rate and the monthly Interbank Equilibrium Interest Rate (TIIE) published by Banco de México.

[9] See Box 3: Gender gap in credit: widening or narrowing with uncertainty? from the June 2024 Financial Stability Report.

the relationship between the bank and the company, and the time (in months) since the company first entered the credit market. Including these variables in the analysis allows us to exclude their impact on the final estimate of the gender gap, and thus identify the part that cannot be explained with the available information.

Subsequently, other factors are added as variables reflecting characteristics of the loan that could determine the amount and interest rate, as well as the credit risk.[10] In particular, information is added on whether the loan is collateralized, whether it is revolving, its maturity (in months), and whether its interest rate is fixed or variable.

Finally, bank, economic sector and state-level fixed effects are included, which makes it possible to exclude from the final estimate of the gender gap any impact that a given bank, company in an economic sector or region could have on the financing conditions of the loan.

IV. Results

The results show that there are important differences between the financing conditions of women and men. In general terms, women obtain smaller loans and higher financing costs than men, which cannot be explained by macroeconomic factors or events, characteristics of the sector or region where women's companies tend to operate more, or other personal and labor characteristics of the borrowers, or of the loans.

In terms of amount, the results indicate that, on average, women receive 22.7% less credit than men, even when excluding the possible impact of the macroeconomic environment on the gap (Table 1). Part of this difference is explained by the fact that women firms tend to be smaller and have a shorter credit history. As reflected in column (2), when these variables are included in the specification (and therefore their possible impact on the gap estimation is excluded), the new estimated difference between women and men decreases to 17.5%. Moreover, since women tend to have fewer assets to back their loans, when information on collateral provision is included in the specification the estimated gap falls to 15.5%.

Then, when considering other elements related to loan characteristics, the gap remains close to 15%. Finally, when including in the specification factors linked to the characteristics of the bank granting the loan, the sector and the region where the company operates, the difference persists. Therefore, the results suggest that there is an unexplained or conditional gender gap, which implies that women obtain lower loan amounts due to factors that cannot be identified or measured with the available information.

Regarding financing costs, women face interest rates 1.4 percentage points higher under comparable macroeconomic conditions (Table 2). This difference is reduced to 1.1 percentage points when considering the characteristics of the companies, and decreases to 0.9 when taking into account that men tend to provide more collateral than women. However, even after including other factors that could explain the rate spreads between women and men, such as bank characteristics or the sector and region of the companies, the difference persists. Thus, there is also an unexplained gender gap in financing costs.

In addition, the analysis of non-performing loan ratios confirms that women do not exhibit higher default rates. This indicates that women's less favorable financing conditions cannot be explained by the default observed once the loans were granted, but rather by other factors.[11]

[10] The collateral variable indicates whether the new loan has any backing, whether financial, from a physical asset or from development banks. This information comes from the CNBV's monthly database of new loans granted to sole proprietorships.

[11] A similar analysis was conducted to estimate the gender gap in non-performing loan ratios, i.e., post- origination credit risk, with firm-level data on total commercial banks loans for the same time period. The results show that, when comparing companies and loans with similar characteristics, women-owned companies have lower non-performing loan ratios.

Table 1
Gender Gap in Loan Amount

	(1)	(2)	(3)	(4)	(5)
Women-Led Businesses?	-0.227*	-0.175*	-0.155*	-0.150*	-0.205*
Remarks	467,983	467,983	467,983	467,983	467,983
Macro-conditions economic (time fixed effects)	X	X	X	X	X
Company characteristics[1]		X	X	X	X
Is there a warranty?[2]			X	X	X
Credit characteristics[3]				X	X
Fixed effect Bank, state and sector					X

Notes: * indicates that the estimated effect is statistically significant at 1%.
1 The characteristics of the companies include the variables: age of the borrower (according to its RFC), the regulatory probability of default, and the size of the company, measured by the number of workers. Credit history characteristics include the variables: past-due loans at some point in time, past-due loans in the last 12 months, the length of time (in months) of the relationship between the bank and the company, and the time (in months) since the company first appeared in the credit reports.
2 The variable guarantee is a dichotomous variable that indicates whether the new loan has a guarantee.
3 The characteristics of the loan include the type of interest rate (fixed or variable), the term of the loan (in months) and whether the loan is revolving or non-revolving.
Source: Banco de México and CNBV.

In particular, conditional or unexplained gender gaps may be due to a multiplicity of factors, ranging from specific characteristics of the companies that are difficult to measure with the available information, to differences in levels of risk aversion or the existence of gender biases.

Table 2
Gender Gap in Financing Costs

	(1)	(2)	(3)	(4)	(5)
Women-Led Businesses?	1.454*	1.155*	0.983*	0.974*	0.587*
Remarks	467,983	467,983	467,983	467,983	467,983
Macro-conditions economic (time fixed effects)	X	X	X	X	X
Company characteristics[1]		X	X	X	X
Warranty [(2)]			X	X	X
Credit characteristics[3]				X	X
Fixed effect Bank, state and sector					X

Notes: * indicates that the estimated effect is statistically significant at 1%.
1 The characteristics of the companies include the variables: age of the borrower (according to its RFC), the regulatory probability of default, and the size of the company, measured by the number of workers. Credit history characteristics include the variables: past-due loans at some point in time, past-due loans in the last 12 months, the length of time (in months) of the relationship between the bank and the company, and the time (in months) since the company first appeared in the credit reports.
2 The variable guarantee is a dichotomous variable that indicates whether the new loan has a guarantee.
3 The characteristics of the loan include the type of interest rate (fixed or variable), the term of the loan (in months) and whether the loan is revolving or non-revolving.
Source: Banco de México and CNBV.

V. Concluding remarks

The results indicate that women entrepreneurs face less favorable financing conditions: they obtain lower loan amounts and face higher credit costs.

Part of this difference with men is explained by factors that can be measured with the information available from Banco de México and that objectively influence credit risk, such as the smaller size of companies led by women, the lower availability of assets to offer as collateral, or a more limited credit history due to a later female incorporation into the credit market. However, even when all these objective factors are considered, women continue to face less favorable financing conditions than men.

These results suggest that better credit conditions for women require policies that allow them to save, accumulate assets, and offer guarantees, or that promote their greater incorporation into the credit market, so that they can have a better credit history and be perceived as less risky.

However, the findings also suggest that, even with all this, it is not enough to close the gaps. The existence of "unexplained" gender gaps indicates that there are dimensions that are difficult to measure or not fully understood behind the differences in financing conditions between women and men.

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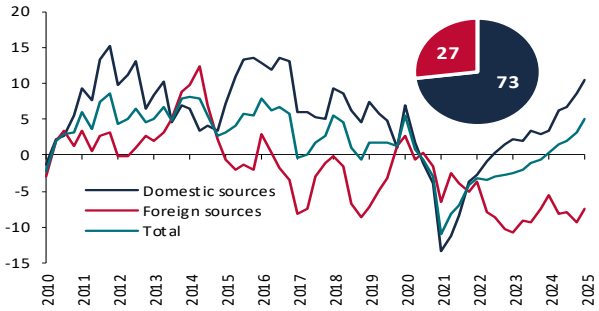
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IV.2.2. Private non-financial companies

Total financing to the country's private non-financial companies increased in real annual terms compared to the previous *Report* (Graph 51). By source of funding, the external component, adjusted for exchange rate effects, has now recorded eighteen consecutive quarters of contraction. However, without considering this adjustment, the peso-dominated equivalent shows an increase, attributable to the depreciation of the peso against the US dollar during the period. The contraction in external financing is explained by both a lower balance of credit granted by foreign banks and a reduced outstanding balance of international debt issuance by companies, with the latter contributing more significantly to the decline. In contrast, domestic financing grew across its three main sources: bank credit, non-bank credit and debt issuance.

The placement of local debt by non-financial companies has been less dynamic over the last semester. In particular, since the previous *Report,* there has been a decrease in short-term issuances. It is worth noting that a significant portion of this debt is intended for liability refinancing. On the other hand, the balance of debt issued abroad in US dollars experienced a notable increase in the second half of the year. The debt maturity structure for 2025 and 2026 gives companies some leeway. As of March 2025, 21% of outstanding local debt is scheduled to mature during those years, while the share of international debt maturing in the same period has increased to 7%, up from 3% in the previous *Report*.

Graph 51
Total financing to Private Non-Financial Companies 1/
Real annual percentage change

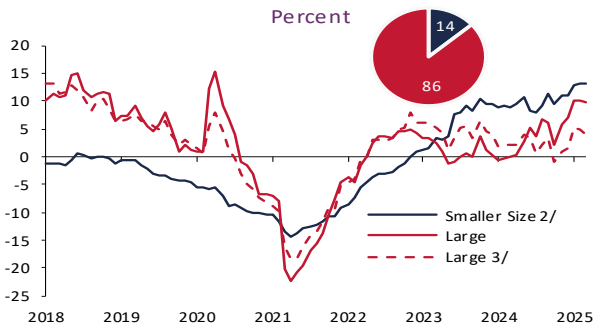


Data as of March 2025.
Source: Banco de México, BMV and SHCP.
Note: The percentages shown here consider the figures relating to non-regulated entities that grant financing and that are included at the bottom of Table 2 (Memo); therefore, the differ from those registered in the upper part of the same table. In addition, figures exclude non-regulated entities for which data stock echange is not available as they are in debt restructuring or liquidation processes.
1/ Includes the loan portfolio of commercial banks and regulated non-bank entities such as regulated sofomes, socaps, sofipos and credit unions, ase well as non-bank non-regulated entities such as non-regulated sofomes and debt-issuing financial companies such as financial leasing companies or financial arms of automotive companies. Includes also debt securities issued both domestically and abroad. Also includes financing from suppliers for listed companies. The growth series is adjusted to take into account the start of availability of financing figures for non-regulated entities (2015-2016). The external financing figures are adjusted for FX effects. A new and preliminary time series for non-regulated sofomes is now shown from June 2023 onwards due to corrections made by entities in their data submisions.

Commercial banks are the main providers of financing to companies. During the period covered by this *Report*, the balance of the bank's portfolio of non-financial companies grew in real annual terms and at a higher rate than in the previous *Report*, mainly explained by the increase in the portfolio of large companies and influenced, to a large extent, by the increase in the exchange rate of the US dollar-denominated portfolio. Eliminating the exchange rate effect, the real annual growth of the portfolio to companies was lower (Graph 52).

Graph 52

Real annual portfolio growth by company size [1/]

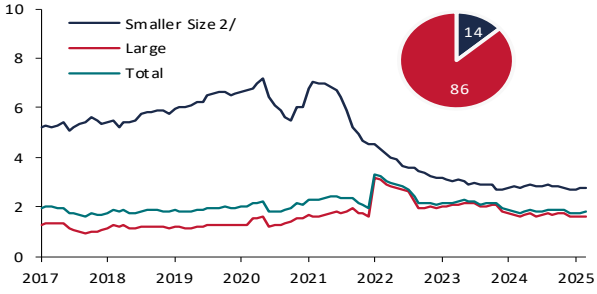


Data as of March 2025.
Source: CNBV.
1/ Commercial bank loan portfolio. The pie chart shows the total percentage of the portfolio of each segment.
2/ Private-non-financial companies not listed on the Mexican Stock Exchange with maximum historical loans less than 100 million Mexican pesos.
3/ Values adjusted for exchange rate effects in the usd credit portfolio.

The non-performing loan ratio of the portfolio granted by commercial banks to companies decreased compared to the previous *Report* and is mainly driven by the growth of the performing loan portfolio. The decrease was identified in the non-performing loan ratios for both large companies and smaller companies, as well as in both the portfolio granted in pesos and that in foreign currency (Graph 53). This decrease is also observed in the adjusted non-performing loan ratio. The levels of both non-performing loan ratios are historically low.

Graph 53

Non-performing loan ratio by company size [1/]

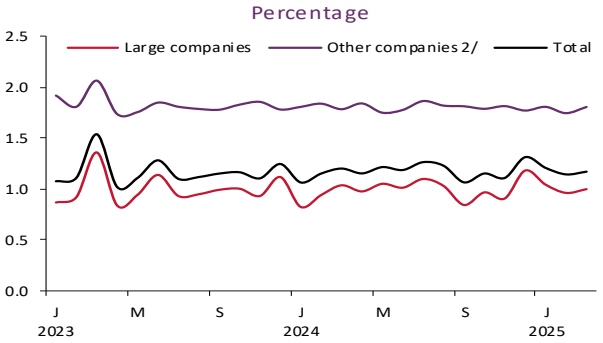


Data as of March 2025.
Source: CNBV.
1/ The pie chart shows the total percentage of the portfolio for each segment.
2/ Private-non-financial companies not listed on the Mexican Stock Exchange with maximum historical loans less than 100 million Mexican pesos as of March 2025.

New loans granted to private non-financial companies presented limited levels of risk, since their probability of default recorded stable and limited levels during 2024 (Graph 54). As for the financing term of loans granted by commercial banks to large private non-financial companies, these exhibited certain stability. Meanwhile the average term of new loans to the rest of the companies has exhibited a downward trend since mid-2024 (Graph 55).

Graph 54

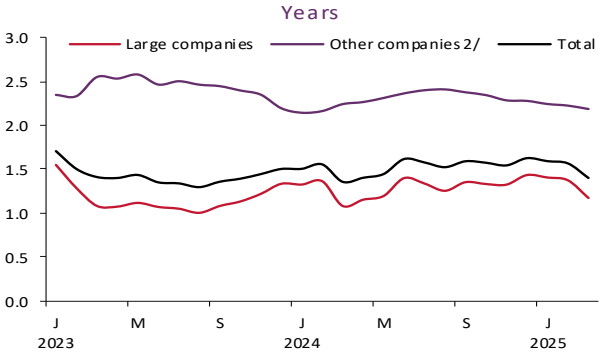
Probability of default for newly originated private companies loans [1/]



Data as of March 2025.
Source: Banco de México.
1/ Includes banks loans and linked sofomes loans.
2/ Private companies with loans of up to 50 million of pesos.

Graph 55

Average term for newly originated private companies loans [1/]



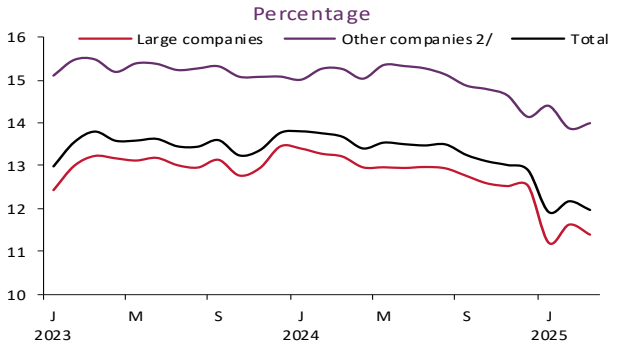
Data as of March 2025.
Source: Banco de México.
1/ Includes banks loans and linked sofomes loans. 3-month moving average.
2/ Private companies with loans of up to 50 million of pesos.

It is worth mentioning that the credit institutions keep the risk of these loans limited, since most of the credit lines granted are revocable; therefore, in the event that the credit institutions perceive an increase in the risk level of a borrower, they can revoke the credit line and reduce the risk to which they are exposed.

On the other hand, as a result of the monetary policy easing cycle, the interest rate charged at the time of contracting the loan has been decreasing since mid-2024, both for loans to large companies and to the rest of the companies (Graph 56).

Thus, the risk profile of the new borrowers, together with the terms at which new loans are granted and the lower interest rate faced by private non-financial companies, suggest that the risk for the banking system is limited.

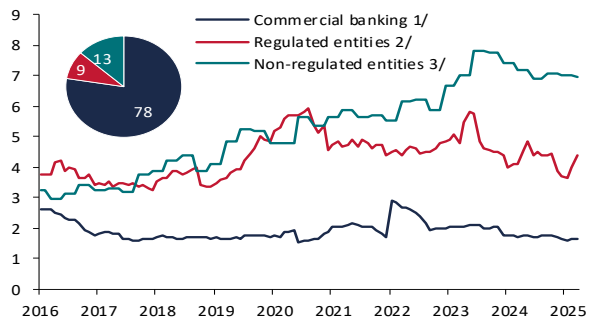
Graph 56
Average interest rate
for newly originated private companies loans 1/



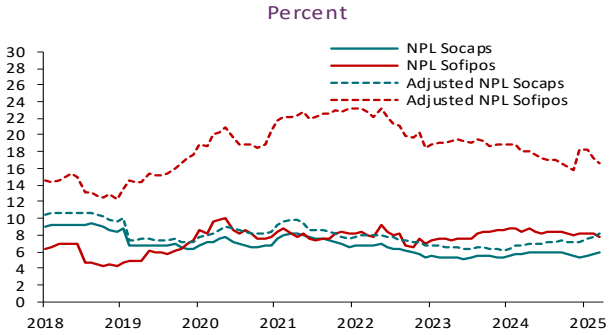
Data as of March 2025.
Source: Banco de México.
1/ Includes banks loans and linked sofomes loans.
2/ Private companies with loans of up to 50 million of pesos.

The non-performing loan ratio of the portfolio granted to companies by non-regulated non-bank financial intermediaries decreased compared to the previous *Report* (Graph 57). During the same period, the adjusted non-performing loan ratio (Adjusted NPL ratio) of sofipos and socaps recorded a slight increase; however, in both cases, the indicator remains below the historical average since 2018. It is worth noting that, in the case of sofipos, this indicator highlights the importance of portfolio write-offs carried out to keep the non-performing loan ratio within a certain range, a practice observed in the consumer loan portfolio in this sector (Graph 57).

Graph 57
Non-Performing Ratio of Corporate Loans Portfolio
a) By entity type



b) Of regulated entities



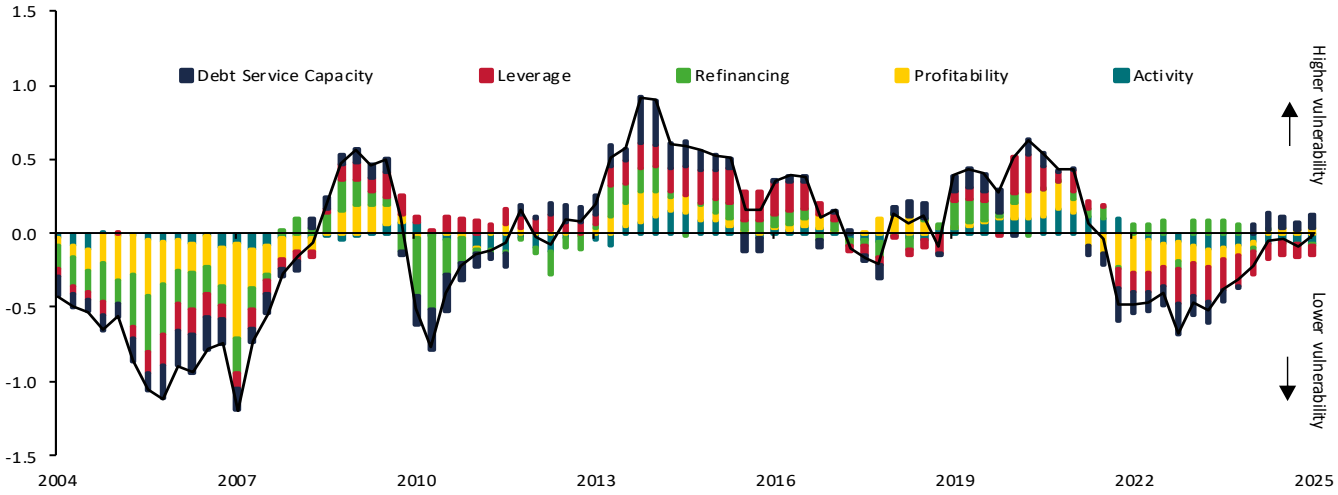
Data as of March 2025.
Source: Banco de México (SIE), CNBV, BMV and Condusef.
1/ Includes the credit portfolios granted by regulated sofomes for having an equity linked with a bank, whether subsidiaries of the latter or not.
2/ Includes the credit potfolios of non-banking regulated financial intermediaries, such as socaps, sofipos, credit unions, sofomes regulated for issuing debt, bond warehouses, development public trusts (FIRA, FOVI, FIFOMI) and government agencies (FND).
3/ Includes credit portfolio of non-regulated sofomes and debt-issuing financial companies, such as financial leasing companies or financial arms of automotive companies. A new and improved time series for non-regulated sofomes is now shown from June 2023 onwards due to corrections made by entities in their data submisions.

Listed private non-financial companies[32]

The vulnerability index for listed companies (IVEL), which measures vulnerabilities across all companies and can be disaggregated by economic sector, increased slightly compared to the previous *Report,* although it remains within the low vulnerability zone. The increase in the indicator's level was driven by the deterioration of variables associated with leverage and debt service capacity (Graph 58).

[32] Includes information for companies listed on the BMV and BIVA.

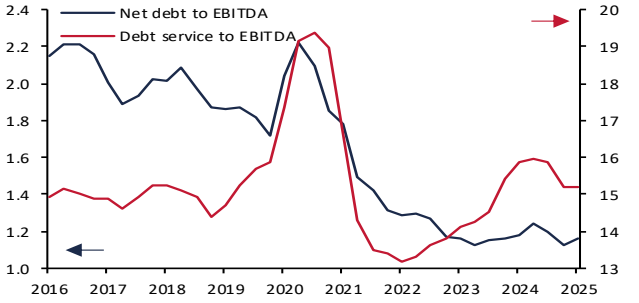
Graph 58
Vulnerability Index for Listed Companies
No units



Data as of March 2025.
Source: Own calculations with data from Bloomberg.

The annual EBITDA[33] generation of listed private non-financial companies increased in real annual terms. Similarly, the debt and debt service cost indicators decreased compared to the previous *Report,* primarily due to the higher operating cash flow generated by companies as a whole (denominator effect) (Graph 59). The increase in debt maturing within the next 12 months led to a decline in companies' liquidity positions; however, cash and equivalents remain sufficient to cover these upcoming maturities. Finally, corporate investment spending increased in real terms both compared to the previous quarter and to the same period of last year.

Graph 59
Listed private non-financial companies' indebtedness and debt service 1/
Left axis: times EBITDA
Right axis: percent of EBITDA



Data as of March 2025.
Source: BMV and BIVA.
1/ EBITDA refers to earnings before interest, taxes, depreciation and amortization.

During the third quarter of 2024, listed private non-financial companies recorded a significant increase in their inventory levels. This trend continued in the fourth quarter of the year and the first quarter of 2025, although with more moderate increases. This behaviour coincides with the uncertainty surrounding future trade conditions and suggests that some companies brought forward production to mitigate costs ahead of the implementation of tariffs on exports to the United States.

[33] The acronym EBITDA refers *Earnings Before Interest, Taxes, Depreciation and Amortization*.

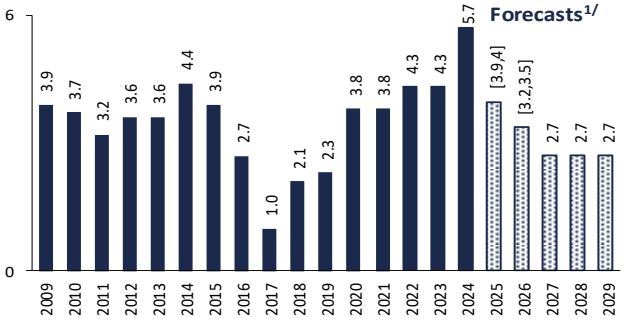
Although there was an improvement in the indicators, some listed companies continue to exhibit financial indicators at levels that suggest potential vulnerabilities; however, the number of companies in this condition has remained stable since the previous *Report*. In addition, there have been episodes of volatility in the exchange rate of the peso against the US dollar, prompting a closer analysis of the hedging strategies used by listed companies. This analysis revealed that the number of companies with currency mismatches decreased slightly and remains low relative to the total number of companies. Notably, the exposure of commercial banks to vulnerable companies or those with currency mismatches remains low in relation to their regulatory capital.

IV.2.3. Public sector

IV.2.3.1. Federal government

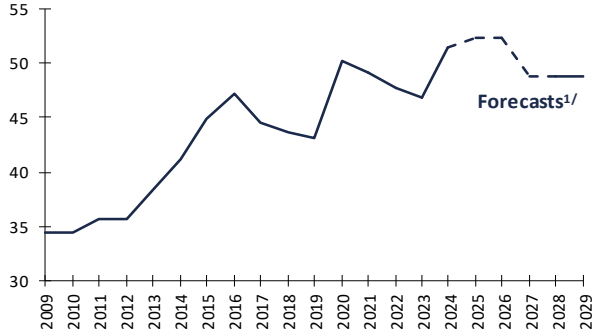
The public sector balance for 2024 showed a slightly lower deficit than programmed figures in the Economic Package (4.9% of GDP versus 5%). By year-end, both budget revenues and expenditures had surpassed the projections set forth in the 2024 Federal Income Law (LIF) and the 2024 Federal Expenditure Budget (PEF). As a result, the Public Sector Financial Requirements (RFSP) registered a deficit of 1.94 trillion pesos, equivalent to 5.7% of GDP (Graph 60), while the Historical Balance of the Public Sector Financial Requirements (SHRFSP) stood at 17.4 trillion pesos, equivalent to 51.4% of GDP (Graph 61).

Graph 60
Public Sector Financial Requirements [1/]
Percent of GDP



Data as of April 2025.
Source: Document related to compliance with the provisions contained in Article 42, Section I of the Federal Budget and Fiscal Responsibility Law (SHCP) for the 2009-2026 information, and the General Economic Policy Criteria for the Revenue Law Initiative and the Draft Federal Expenditure Budget for fiscal year 2025 (SHCP) for the 2027-2029 estimates.
1/ 2024 preliminary, 2025 and 2026 estimated.

Graph 61
Public Sector Financial Requirements Historical Balance[1/]
Percent of GDP



Data as of April 2025.
Source: Document related to compliance with the provisions contained in Article 42, Section I of the Federal Budget and Fiscal Responsibility Law (SHCP) for the 2009-2026 information, and the General Economic Policy Criteria for the Revenue Law Initiative and the Draft Federal Expenditure Budget for fiscal year 2025 (SHCP) for the 2027-2029 estimates.
1/ 2024 preliminary, 2025 and 2026 estimated.

As of the end of March 2025, the deficit of the Public Sector was 121 billion pesos, lower than foreseen in the 2025 Economic Package. Budget revenues and expenditures amounted to 2,149.1 billion pesos and 2,269.7 billion pesos, respectively, both below the programmed in the LIF 2025 and the PEF 2025. Consequently, the RFSP recorded a deficit of 159.2 billion pesos, while the SHRFSP stood at 17.7 trillion pesos.

By the end of 2025, the Federal Government anticipates a public balance deficit of 3.3% of GDP, with budget revenues of 0.2 billion pesos higher than those approved in the LIF 2025 and budget expenditures 7.2 billion pesos above those established in the PEF 2025. As a result, the RFSP and SHRFSP estimates undergo adjustment to a range of [3.9%, 4%] and 52.3% of GDP, respectively (Graph 60 and Graph 61).

IV.2.3.2. State-owned companies

On March 18, 2025, the secondary legislation related to the constitutional reform on energy matters, which was enacted in October 2024, was published. This legislation establishes the change in the legal status of Pemex and CFE, reclassifying them from productive companies to state owned companies. It also mandates their structural reorganization, including the dissolution of their subsidiaries, among other relevant changes for the energy sector.

Petróleos Mexicanos (Pemex)

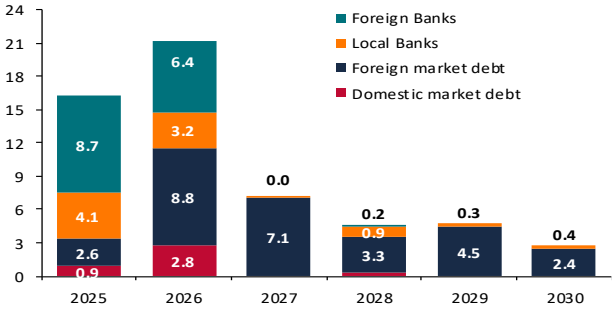
At the end of March 2025, Pemex reported a quarterly net loss that was smaller than the one recorded at the end of the previous *Report (data as of September)*. This contrasts with the quarterly earnings reported in March 2024. On a twelve-month cumulative basis, the net loss was also larger than that reported in the previous *Report* and higher than the loss recorded a year earlier. The accumulated loss is largely explained by a foreign exchange loss resulting from the depreciation of the peso against the US dollar during the period.

The nominal balance in pesos of Pemex's total debt, including suppliers, increased by 8.7% compared to the previous *Report*. This was driven by an increase in external financing, alongside a marginal decrease in local debt. Between 2025 and 2026, Pemex faces maturities equivalent to 37.4% of its total debt, excluding supplier obligations (Graph 62). Regarding Pemex's debt with suppliers, although there was a 20% decrease compared to December, it rose by 0.4% relative to the previous Report (data as of September 2024). Additionally, while short-term debt increased, the liquidity indicator remained stable (Graph 63).

Graph 62

Pemex debt maturities [1/]

Percent of total debt



Data as of March 2025.

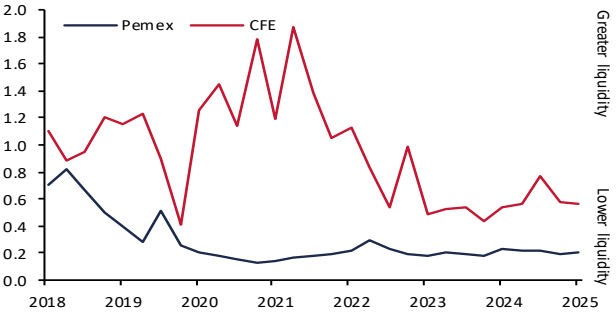
Source: BMV.

1/ It takes into account total debt without suppliers.

Graph 63

Liquidity position of Pemex and CFE [1/]

Times



Data as of March 2025.

Source: BMV.

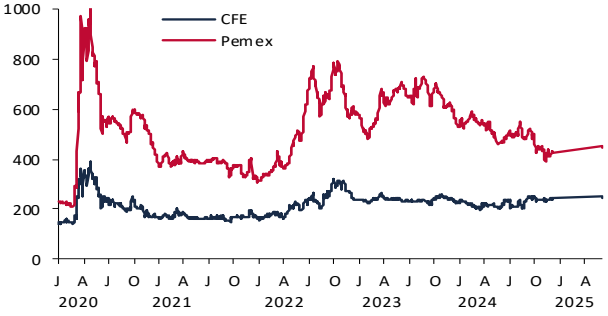
1/ It is defined as the result of dividing short-term cash and accounts receivable by the sum of 12-month liabilities with suppliers and 12-month financial debt.

Finally, at the beginning of June 2025, Pemex's five-year *CDS* stood at a higher level than that recorded in the previous *Report* (Graph 64).

Graph 64

USD 5-year Credit Default Swap of Pemex and CFE

Basis points



Data as of June 6, 2025.

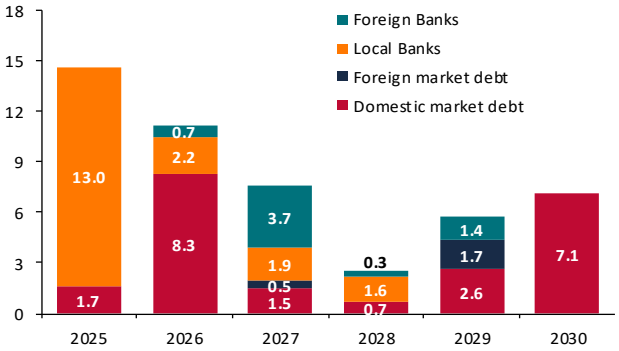
Source: Markit.

Federal Electricity Commission (CFE, its acronym in Spanish)

At the end of March 2025, CFE reported a quarterly net loss that was larger than the one recorded in the previous *Report;* this contrasts with the quarterly profit reported in March 2024. On a twelve-month cumulative basis, a net loss was also recorded, in contrast to the profit observed one year earlier. The accumulated loss is explained by a foreign exchange loss resulting from the depreciation of the peso against the US dollar.

The nominal balance of the company's peso-denominated debt increased by 2.3% compared to the previous *Report*, despite a reduction in the balance of its foreign currency-denominated debt. Between 2025 and 2026, CFE faces maturities representing 25.9% of its total debt, excluding supplier obligations (Graph 65). Additionally, the company's liquidity indicator deteriorated due to an increase in short-term debt combined with a decrease in cash and cash equivalents.

Graph 65
CFE debt maturities [1/]
Percent of total debt



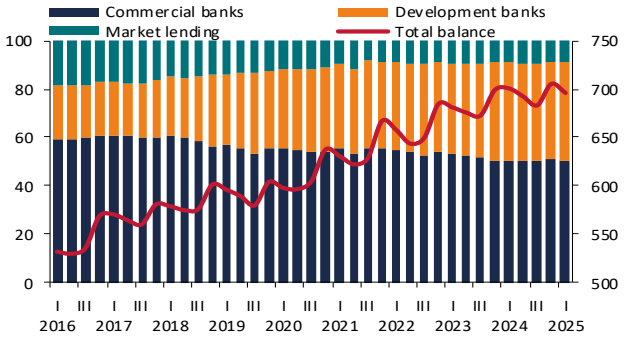
Data as of March 2025.
Source: BMV.
1/ It takes into account total debt without suppliers.

Finally, at the beginning of June 2025, CFE's five-year CDS stood at a higher level than that recorded in the previous *Report.*

IV.2.3.3. States

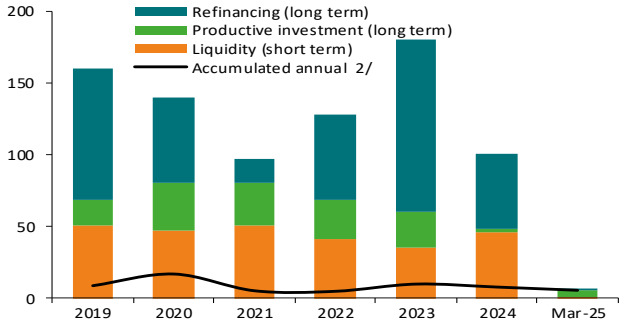
At the end of first quarter of 202 5, financing to sub-national governments presented a decrease in relation to that observed in the same period of 202 4, of around 0.7%. Notwithstanding this reduction, commercial banks remained the main creditor of sub-national governments, with a share close to 51% of total financing, while development banks registered levels of around 40% (Graph 66). In particular, the contracting of bank financing by state governments, to the first quarter of 2025 presented a lower dynamism in relation to what was observed in the same period of the previous year (Graph 67). In this regard, there was a change in the term structure of financing contracted during the first three months of 2025, in which a large proportion was long-term credit, in contrast to the same period of 2024, in which only short-term credit was contracted

Graph 66
Subnational government financing
Right axis: Billions of pesos
Left axis: Percentage



Data as of first quarter 2025.
Source: SHCP.

Graph 67
Loans granted to state governments [1/]
Billions of pesos



Data as of March 2025.
Source: Prepared from state government released information.
1/ Posted information as of May 30th 2025 by state governments.
2/ Accumulated as of first quarter per year considering liquidity and productive investment loans.

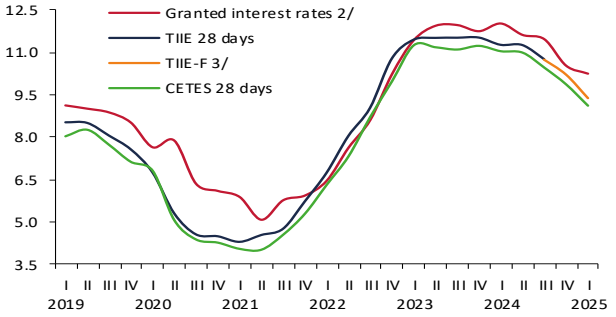
At the end of the first quarter of 2025, state governments presented relatively favorable conditions for contracting bank financing. In this regard, the average contracted interest rate for loans

was lower than that of the previous quarter. It should be noted that, during the fourth quarter of 2024, in accordance with the transition to the adoption of the TIIE Funding Rate (TIIE Funding Rate) in the financial system operations, some state governments carried out competitive credit offer processes considering this reference interest rate (Graph 68).[34]

Graph 68

Weighted average interest rate on offers of bank loan to state governments 1/

Percentage



Data as of first quarter 2025.

Source: Prepared from state government released information.

1/ The Federal Entities and Municipalities Financial Discipline Law establishes that, for the sustainable management of public finances, federal entities must conduct competitive processes for public debt bidding and, once the related legal instruments have been executed, the public entity must post the results of such instruments on its official website.

2/ Posted information as of May 30th 2025 by state governments.

3/ In the fourth quarter of 2024, state governments conducted competitive processes with the TIIE 28-day rate and the Overnight TIIE funding rate. In the first quarter of 2025, the reference rates for public debt auctions were the Overnight TIIE funding rate and the Compounded in advance Overnight funding TIIE, for 28 days.

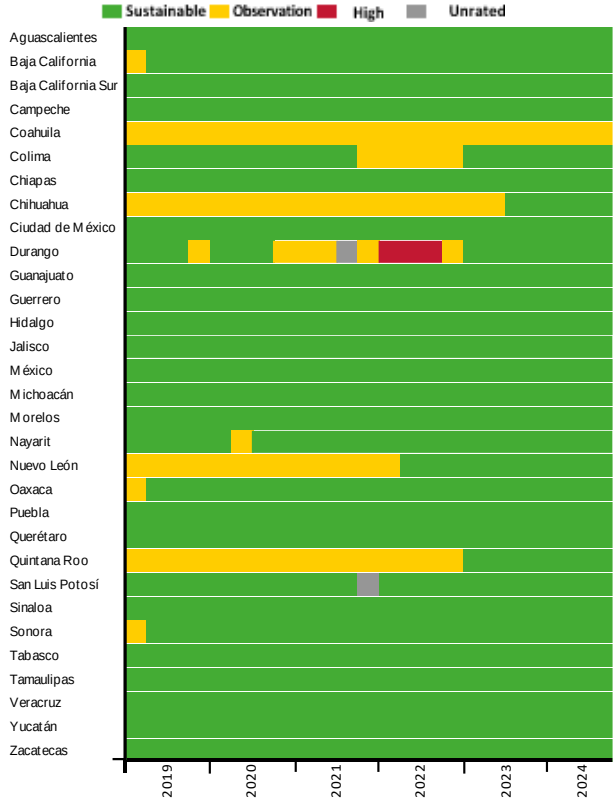
Between October 2024 and March 2025, the rating agencies reviewed their credit risk assessment of the states. In particular, state governments showed no changes in their credit risk profiles; for municipal governments, nine showed an improvement and two showed a deterioration. As a result, most sub-national governments maintained a lower risk perception.

At March 202 5, according to the SHCP alert system, debt maturity risks and possible pressures on sub-national governments' revenues remain limited. This system, which is composed of three indicators that reflect different aspects of debt sustainability, shows that debt remained stable for most state governments in recent quarters.[35] In this regard, only one state government presented a level of indebtedness under observation (Figure 1 a). On the one hand, at second half of 2024, twenty-one municipal governments exhibited levels of indebtedness under observation, and two municipalities continued to have high levels of indebtedness (Figure 1b).

Figure 1

Subnational government debt sustainability 1/

a) State governments, quarterly information 2/



[34] During November and December 2024, most of the loans contracted by state governments had the TIIE 28 as reference rate, while two state governments contracted loans referenced to the TIIE Funding Rate (TIIE Funding Rate, its acronym in Spanish).

[35] The indicators considered in the alert system are: i) Debt and obligations over unrestricted revenues; ii) Debt service and obligations over unrestricted revenues; and iii) Short-term obligations, suppliers and contractors minus cash, banks and temporary investments over total revenues. Details of the methodology are available for consultation on the SHCP website: Financial Discipline of States and Municipalities.

b) Municipal governments, half-yearly information

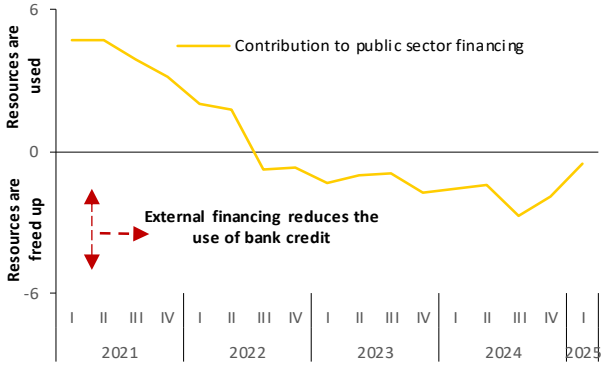
2023-2	2024-2
SUSTAINABLE DEBT	
568 municipalities 3/	593 municipalities 3/
OBSERVATION DEBT	
24 municipalities	21 municipalities
Chihuahua (3), Coahuila (2), Durango (3), Guerrero, Jalisco (2), México (3), Morelos, Nayarit, San Luis Potosí, Sonora (3), Veracruz (4)	Aguascalientes, Chihuahua, Coahuila, Durango, Guerrero, Jalisco, México (3), Michoacán, Morelos, Nayarit, San Luis Potosí, Sonora (3), Tlaxcala, Veracruz (4)
HIGH DEBT	
2 municipalities	2 municipalities
Mapimí, Tlahualilo (Durango)	Mapimí, Tlahualilo (Durango)

Data as of first quarter 2025 for state governments and as of second half-yearly 2024 for municipal governments.
Source: Prepared from SHCP information.
1/ The result of the alert system, for its calculation, considers three indicators: i) Debt and obligations over unrestricted revenues; ii) Debt service and obligations over unrestricted revenues; iii) Short-term obligations, suppliers and contractors minus cash, banks and temporary investments over total revenues. The methodology can be found on the SHCP website:
https://www.disciplinafinanciera.hacienda.gob.mx/es/DISCIPLINA_FINANCIERA/Entidades_Federativas_2025
2/ The State of Tlaxcala has no loans and obligations since 2019.
3/ As of second half-yearly 2023, 123 municipalities had failed to provide information and 71 entitites had not been rated, while as of second half-yearly 2024, 73 municipalities had failed to provide information and 99 entities had not been rated.

IV.2.4. Foreign sector and capital flows

Access to international markets enables emerging economies, particularly their public sectors, to capture external savings through capital inflows, thereby reducing their reliance on domestic financing and freeing up resources for other sectors of the economy. The capital outflows in the last quarter of 2024 and inflows in the first quarter of 2025 resulted in a net capital inflow over the past year, albeit of limited magnitude. Consequently, the public sector continued to free up domestic financial resources for other sectors, albeit to a lesser extent than in the previous version of this *Report* (Graph 69).

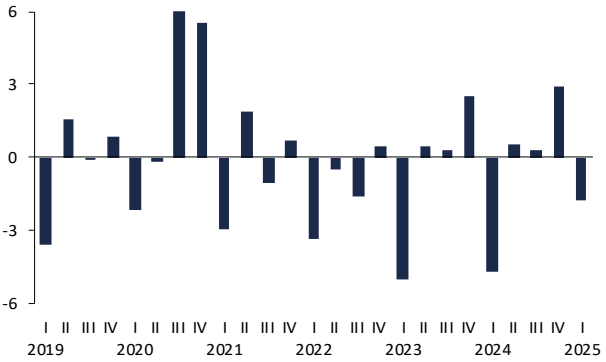
Graph 69
Contribution of net capital flows to real domestic financing growth of the Public Sector[1/]
Percentage points



Data as of first quarter of 2025.
Source: Banco de Mexico and CNBV.
1/ The contribution of capital flows to financing is obtained as the difference between the annual growth rate of real financing and the rate that would have been observed in the absence of these flows. The latter rate is obtained by assuming, in a vector autoregressive (VAR) model, that the coefficients associated with capital flows and the shocks to them are equal to zero. The model uses data from Q1 2010 to Q1 2025 and a moving window of 31 quarters. Capital flows are defined as the sum of net direct, portfolio and other investment flows.

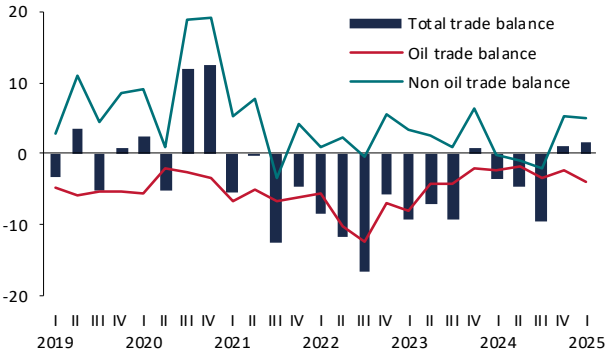
The current account registered a surplus of 2.9% of GDP in the last quarter of 2024 and a deficit of 1.8% of GDP in the first quarter of 2025 (Graph 70). Within the trade balance, the oil and non-oil balances were in deficit and surplus, respectively, during both quarters (Graph 71). The financial account showed net lending to the rest of the world in the fourth quarter of 2024, with capital outflows observed in the portfolio investment and other investment categories. In contrast, the first quarter of 2025 recorded net borrowing, characterized by capital inflows in direct investment and other investment, but capital outflows in portfolio investment.

Graph 70
Current account
Percent of GDP



Data as of first quarter of 2025.
Source: Banco de Mexico.

Graph 71
Trade balance
Billions of dollars

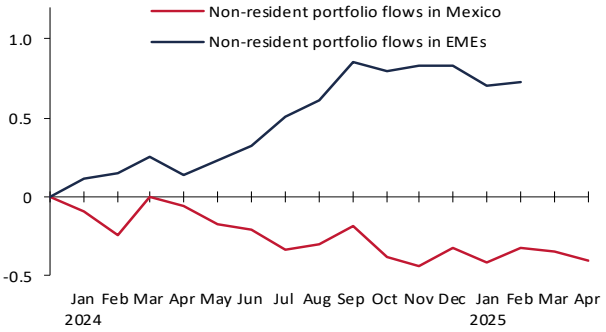


Data as of first quarter 2025.
Source: Banco de Mexico.

According to timely data from the Institute of International Finance (*IIF*), emerging market economies experienced portfolio outflows from non-residents during October-November 2024, although this was mild for the two-month period as a whole. This period was characterized by geopolitical and trade uncertainty, as well as expectations of a more restrictive monetary policy in the United States, driven by the potential impact of a new administration and upward surprises in new employment and inflation data (Graph 72). In December, following the United States' elections in November and a shift toward more positive sentiment regarding their implications for the corporate sector, the portfolio outflows came to a halt. However, in the initial months of 2025, the announcement and implementation of global tariffs reignited the negative sentiment, once again precipitating outflows.

In Mexico, the global environment had a more pronounced impact during October and November, leading to portfolio outflows in the last quarter of 2024, followed by a stronger recovery in December. Notably, in 2025, a significant inflow was observed in February, when, despite the adverse global context, Mexico received portfolio flows from non-residents. This was partly due to the tariff exemption announced by the United States for Mexico, in an environment still dominated by protectionist rhetoric, and contrasted with the outflows observed in the other three months for which 2025 data is available.

Graph 72
Acummulated non-resident portfolio flows to Mexico and EMEs[1/]
Percent of GDP



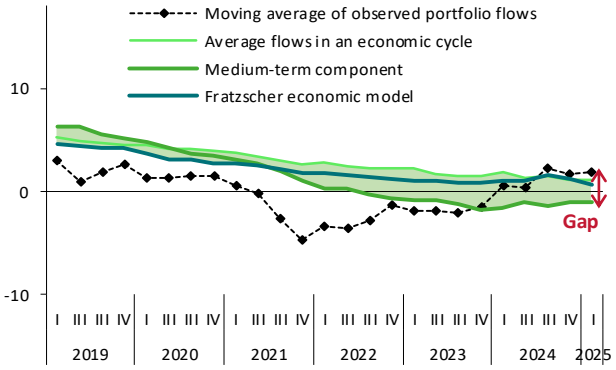
Data as of April 2025.
Source: Institute of International Finance (IIF).
1/ Cumulative flows since January 2024. The portfolio flow measure of emerging economies was obtained by summing the flows from Brazil, Chile, Hungary, India, Indonesia, Poland, the Czech Republic, South Africa, Thailand, and Türkiye and dividing it by the sum of their GDP in 2023. Those countries considered in the monetary policy and international financial markets section of the January-March 2021 Quarterly Report for which information was available from the IIF were included.

In this context, it is important to assess the margin available for future portfolio inflows or outflows of non-residents. To do so, an estimate of its natural range is used.[36] The measure of accumulated flows over the last 12 months decreased compared to the previous version of this *Report*. This decrease was smaller than the drop exhibited by the upper limit of

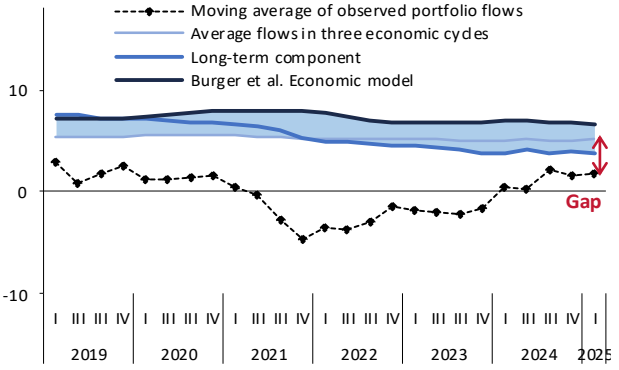
[36] This value measures the portion of flows that is not driven by temporary factors and affected only by persistent and structural factors. See Box 3 of the Financial Stability Report - June 2023.

the natural flow range for the short-and-medium-term (Graph 73a), but larger than the decline exhibited by the lower limit of the range for the long-term (Graph 73b). In other words, the results of the exercise indicate that there is less room for non-residents portfolio inflows due to conjunctural reasons, but conversely, there is more room for such inflows to occur due to structural factors linked to the long-term performance of the Mexican economy. These results emphasize the importance of adopting measures that promote Mexico's potential growth.

Graph 73
Range of natural flows[1/]
a) Medium-term
Billion dollars



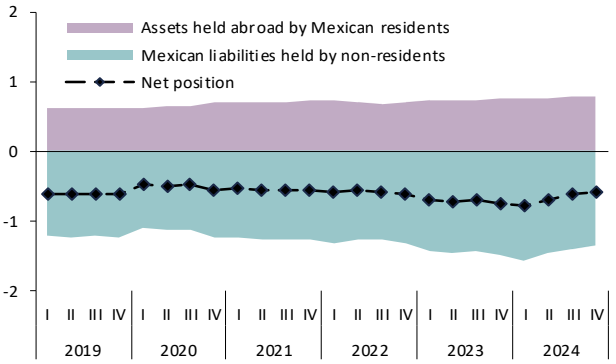
b) Long term
Billion dolars



Figures as of first quarter of 2025.
Source: Banco de Mexico, IMF, Bloomberg, IIF and UBS.
1/ One year moving average.

Mexico's net international investment debt position decreased in the fourth quarter of 2024 compared to the same period in 2023. This result reflected, on the one hand, a 4.8% increase in investments by Mexican residents abroad and, on the other hand, a 9.5% decrease in investments coming from abroad (Graph 74).

Graph 74
International investment position[1/]
Trillions dollars



Data as of Q4 2024.
Source: Banco de Mexico.
1/ It refers to the international investment position at the end of the period. The net international investment position includes derivatives, but these are not recorded as assets or liabilities. Mexican liabilities in the hands of non-residents are recorded with a negative sign, which implies a change in sign compared to their mesurement in the international investment position statistics of the balance of payments.

Since the last version of this *Report*, the complexity of the global macro-financial environment has increased significantly. This new environment is characterized by the potential reorganization of global value chains and trade relations. It seems to provide an opportunity for countries like Mexico to differentiate themselves from other emerging economies in terms of attracting external capital. Mexico is distinguished by a solid macro-financial framework, a strategic geographical position, diverse trade agreements, and, in general, good relations with other countries. In this regard, it is vital that Mexico continues to stand out for its solid macro-financial framework and continues to promote the long-term growth of the Mexican economy, as this section demonstrates.

IV.3. Institutions

The total financial system assets increased at the end of March 2025 at a slower rate than that recorded in previous quarters; in fact, December 2024 recorded a level of growth unseen since 2009. However, asset growth was diverse among entity types. The assets under management of investment funds registered significant annual growth in real terms, mainly due to higher volumes in their investment portfolios associated with greater purchases of securities.

Commercial banks remain the most significant intermediary in terms of total assets within the financial system. In addition, banking licenses and authorizations continue to be requested due to the new business models with a fully digital approach; however, some authorized institutions have not yet started operations.[37]

Table 3

Mexican Financial System Structure[1/]

	Number of entities in operation[2/]	Share of total assets		Real annual growth rate of assets	Share of Top 5 largest entities[3/]
		in the Fin. Syst.	in GDP		
	No units	Percent	Percent	Percent	Percent
Commercial banks[4/]	52	42.5	44.1	6.5	60.3
Siefores (afores)[5/6/]	118 (10)	20.1	20.8	13.7	76.6
Investment Funds (Managers)[7/]	636 (31)	12.6	13.0	20.3	51.0
Development Institutions[8/]	9	9.2	9.5	4.9	90.9
Insurance Companies	111	7.9	8.2	11.9	42.6
Broker dealers	36	3.4	3.5	1.9	59.2
Non-regulated sofomes[9/]	1,665	1.8	1.9	9.0	23.0
Regulated sofomes[10/]	23	0.8	0.9	7.4	75.7
Savings and Loan Cooperatives (socaps)	155	0.8	0.9	9.5	55.4
Popular Finance Corporations (sofipos)[11/]	34	0.6	0.6	60.9	84.8
Credit Unions	69	0.2	0.2	2.9	50.6
Bond warehouses	14	0.1	0.1	4.4	94.8
Crowdfunding Institutions[12/]	23	0.0	0.0	5.7	85.1
Electronic Payment Fund Institutions[12/]	42	0.1	0.1	11.1	78.7
Total System	**2,274**	**100.0**	**103.7**	**9.8**	**n.a.**
Memo: Infonavit, Fovissste and Infonacot	*3*	*8.2*	*8.5*	*7.0*	*n.a.*
Fondo de Pensiones para el Bienestar	*1*	*0.1*	*0.1*	*n.a.*	*n.a.*
Fondo Mexicano del Petróleo	*1*	*0.1*	*0.1*	*46.4*	*n.a.*

Data as of March 2025.

Source: Banco de México, Mexican Stock Exchange (BMV), National Banking and Securities Commission (CNBV), National Insurance and Surety Commission (CNSF), National Retirement Savings Commission

1/ This table includes direct financing granted by the financial institutions listed here and may not match the direct and induced financing reported in the Development Banking section.

2/ Refers to the number of entities that are effectively operating and report positive assets. This may differ from the number of entities authorized to operate.

3/ The five entities with the highest concentration of assets within their respective sectors are: Commercial Banking: BBVA, Santander, Banorte, Banamex, and HSBC. Afores: XXI Banorte, Profuturo, SURA, Banamex, and Coppel. Investment Fund Managers: BBVA Bancomer Gestión, Impulsora de Fondos Banamex, Sam Asset Management, Operadora de Fondos Banorte, and Operadora HSBC. Development Institutions: Banobras, Nafin, Bancomext, Banjército, and FIRA. Insurance and Surety Companies: Pensiones Banorte, Seguros BBVA, Grupo Nacional Provincial, Seguros Banamex, and Pensiones BBVA. Broker Dealers: Banorte-Ixe, Finamex, Monex, Goldman Sachs, and Actinver. Non-regulated sofomes: Binmtec, Crédito Real, BMW Financial Services México, Cashahora, and Préstamos Felices en 15 Minutos. Regulated sofomes: GM Financial, Arrendadora y Factor Banorte, Ford Credit, Traton (formerly Navistar), and Op. de Serv. Mega. Socaps: Caja Popular Mexicana, Caja de Ahorro de los Telefonistas, Caja Morelia Valladolid, Acreimex, and Coopdesarrollo. Sofipos: Nu México Financiera, Financiera Sustentable, Libertad Servicios Financieros, STORI (formerly SAVVI), and Klar (formerly SEFIA). Credit Unions: Ficien, Unión de Crédito Agricultores de Cuauhtémoc, Agropecuario de la Laguna, Unión Crédito Alpura, and Unión de Crédito para la Contaduría Pública. Bonded Warehouses: Afirme, Mercader, Sur, Banorte, and Accel. IFC (Crowdfunding Institutions): Emprendimientos Maussan y González, Play Business, SFC Snowball Community, Plataforma Inmobiliaria Cien Ladrillos, Afluenta México. IFPE (Electronic Payment Fund Institutions): Sistema de Transferencias y Pagos STP, MercadoLibre, Compropago, NVIO Pagos México, Inteligencia en Finanzas.

4/ Total assets of commercial banks include those of regulated Sofomes that consolidate with the respective bank when they are subsidiaries. Since the previous report, two new banks have started operations: Hey Banco and Openbank. Additionally, there are two banks authorized by the authorities in 2024 that are not yet in operation: Banco Plata and Revolut.

5/ The group of pension funds managed by the 10 Afores comprises 118 Siefores.

6/ From January 2020, there was an increase in the number of Siefores due to the transition to a new Generational Fund-based Siefore Investment Regime following regulatory changes issued on December 13, 2019, by Consar. More information is available here: https://www.gob.mx/cms/uploads/attachment/file/517105/BP-32-2019_TDF_transicio_n_VF_2_.pdf

7/ The 31 investment fund operators manage a total of 636 investment funds.

8/ Includes development banks (6) and development trusts (FIRA, FOVI, and FIFOMI).

9/ Figures related to the number of non-regulated Sofomes come from the Commissions Registry – RECO (Condusef). New preliminary data is presented following corrections to the information reported by non-regulated sofomes as of June 2023. Only sofomes with a positive portfolio are counted. The credit portfolios of non-regulated Sofomes that grant credit exclusively to related entities or subsidiaries are not considered, as they are not credit intermediaries in the strict sense. As of December 2024 (latest available data), the Bureau of Financial Entities has information on 2,145 non-regulated sofomes with operational status, including those that grant credit exclusively to related entities or subsidiaries. The asset figures refer to the total credit portfolio granted by these entities as reported to Condusef.

10/ Regulated sofomes include those that are regulated due to ownership ties to a bank (but are not subsidiaries, and thus do not consolidate assets), some of which belong to a financial group. Sofomes that are regulated because they issue debt on the BMV are also included..

11/ In December 2022, Nu México, a Fintech specializing in credit cards, merged its business with a non-operational sofipo it had acquired in December 2021. Since then, its assets have been counted under the sofiposector, becoming the largest entity in the sector with a 40% share of total assets, raising the concentration of the top five entities in the sector to 79%. Before this migration, no public financial data was available for this entity. The sofipo CAME did not report data for March 2025; therefore, the latest available figures from November 2024 are used.

12/ As of May 2025, there are four authorized crowdfunding institutions and fifteen electronic payment fund institutions that are not yet operational. The asset figures only include the 49 IFEs that published financial statements on their websites as of March 31, 2025. These institutions do not conduct credit intermediation on their balance sheets; in the case of crowdfunding institutions, the financing provided by investors through the platform to projects is recorded in memorandum accounts.

[37] The banks authorized by the authorities in 2024 that are not yet in operation are Banco Plata and Revolut. In addition, in April 2025, the CNBV authorized the sofipo Nu to become a bank; however, the conversion has not yet materialized and the process continues.

IV.3.1. Commercial Banks

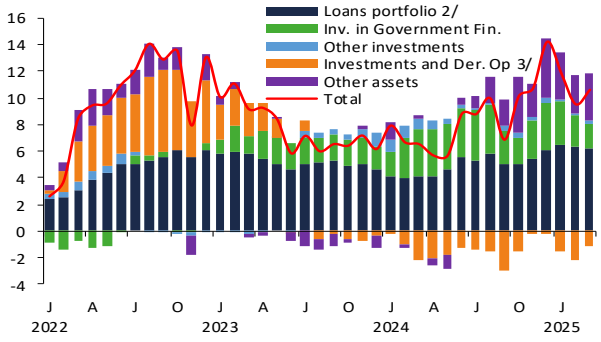
Between September 2024 and March 2025, commercial banks' assets expanded, mainly due to the growth of the loan portfolio and investments in securities, while derivative transactions registered a slowdown (Graph 75a).

During the same period, liabilities also recorded annual growth, mainly reflecting increases in derivative transactions (Graph 75b).

Graph 75
Assets and liabilities annual contribution growth 1/

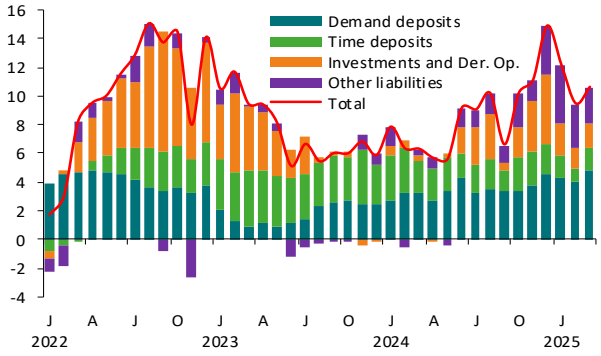
a) Assets

Percentage



b) Liabilities

Percentage



Data as of March 2025.
Source: CNBV.
1/ Unbound commercial banks.
2/ Net loans portfolio includes allowances for credit risks, deferred items and acquired collection rights.
3/ Includes purchase operations value considering to receive cash at maturity, when the entity act like a buyer.

At the end of 2024 and beginning of 2025, the commercial banks' net interest margin continued to grow as a proportion of stockholders' equity (Graph 76), although at a slower pace, mainly reflecting the performance of local systemically important banks.

Graph 76
12 months cumulative financial margin to total equity ratio 1/

Por ciento

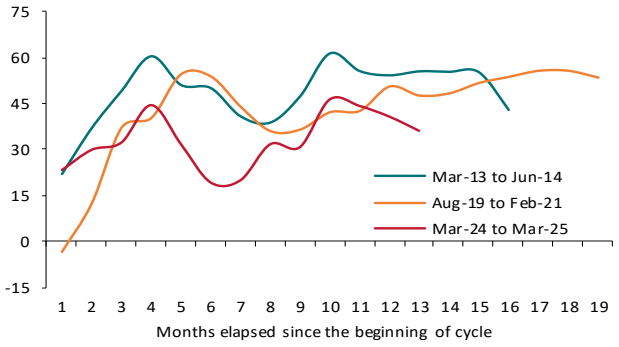


Data as of March 2025.
Source: Banco de México with data from CNBV.
1/ Includes banks loans and linked sofomes loans.

Although the rates paid by banks for their deposits decreased in response to the monetary policy decisions implemented as of March 2024, this adjustment was not uniform by type of bank and, in general, the degree of response observed in this part of the cycle was lower than in the last monetary policy cycles. In particular, in the current easing cycle, the ratio of changes in the cost of funds raised to changes in the target rate is lower than in previous cycles (Graph 77).

Graph 77
Ratio of average cost in local currency to target rate 1/

Percentage



Data as of March 2025.
Source: Banco de México.
1/ The ratio is the result of variations since the beginning of the cycle in the average cost of bank deposits between variations since the beginning of the cycle in the target rate. Consider 3 target rate downwards reviews, first since March 8 of 2013 to June 6 of 2014 (-150 bp), second since August 15 of 2019 to February 12 of 2021 (-425 bp), and third since March 22 of 2024 to end of March 2025 (-225 bp). The average cost in local currency of commercial banks includes demand deposits, time deposits, credit securities and interbank loans.

In December 2024, the spin-off at of Citibanamex took place, whereby Citi will operate in Mexico through two separate and independent financial groups: Grupo Financiero Banamex, through Banco Nacional de México focused on the retail business, and Grupo Financiero Citi México, through Banco Citi México operating in the corporate banking segment. This separation was carried out in an orderly manner and under the supervision of the financial authorities.

On the other hand, as a result of the annual review of the degree of local systemic importance of commercial banking institutions, on April 15, 2025 the CNBV, with the prior approval of its Governing Board, approved to increase from seven to eight the number of banking institutions that should be considered locally systemically important, according to their characteristics and relationship with the banking system. It is worth mentioning that these institutions are required to constitute additional capital supplements according to their degree of importance, as well as the Total Loss-Absorbing Capacity requirement (*TLAC*). As a result, both Banco Citi México and Banamex are considered local systemically important commercial banking institutions.[38]

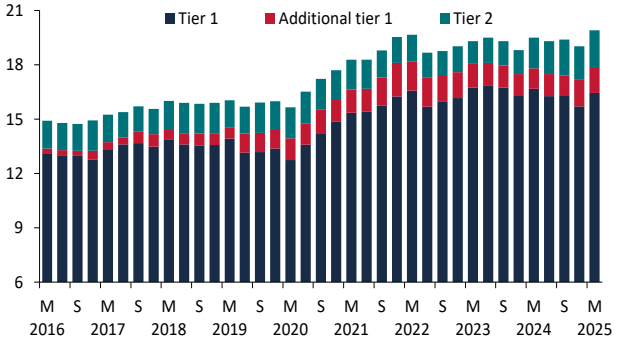
Solvency

Between September 2024 and March 2025, commercial banks as a whole presented capitalization levels well above the regulatory minimums. The capitalization index (CAR) increased from a level of 19.38% in September 2024 to 19.90% in March 2025. This behavior mainly reflected the expansion of regulatory capital, which more than offset an increase in risk-weighted assets (Graph 78 and Graph 79). Against this backdrop, it is noteworthy that the behavior of regulatory capital reflected the dynamism observed in earned capital. On the one hand, the increase in assets subject to risk was mainly derived from higher levels of assets subject to credit risk, as a consequence of a growth in the loan portfolio, as well as in assets subject to market risk and operational risk.

Graph 78

Breakdown of banks' Capital Adequacy Ratio (CAR) by regulatory commercial banks capital [1/]

Percentage



Data as of March 2025.

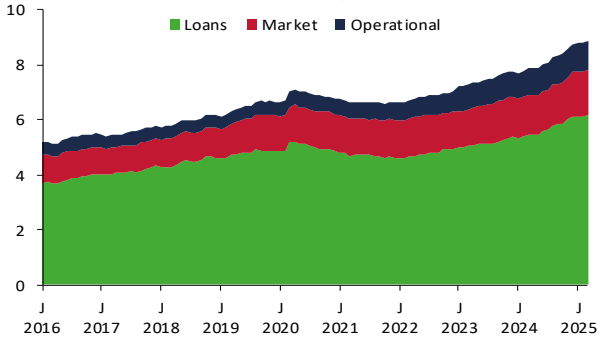
Source: Banco de México.

1/ Capital Adequacy Ratio, is calculated by dividing net capital by risk weighted assets. Net capital is the regulatory capital, and it includes Tier 1, Additional tier 1, and Tier 2 capital. Tier 1 includes earned capital and shareholder contributions, and has the major ability to absorb potenial losses. Additional tier 1 includes perpetual subordinated bonds and surplus reserves, and therefore has a lower ability to absorb potential losses, while Tier 2 includes specif term subordinated bonds, and therefore has a lower ability to absorb possible losses.

Graph 79

Risk weighted assets [1/]

Trillions of pesos



Data as of March 2025.

Source: Banco de México.

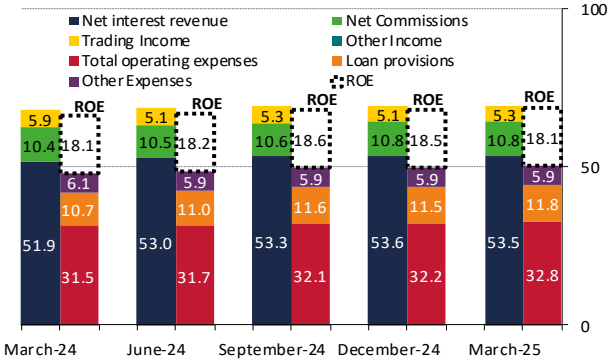
1/ Credit Risk weighted assets reflect the associated risk of the loan portfolio and other credit exposures. Market risk weighted assets are a risk measure that a banking institution holds due to market factors to which are their assets exposed; while operational risk weighted assets are a risk measure for possible losses due to inadequacies or failures in internal processes, personal and internal systems or due to external factors.

[38] Currently the commercial banking institutions of local systemic importance are: BBVA, Santander, Banorte, Banamex, Scotiabank, Banco Citi Mexico, HSBC and Inbursa. See CNBV's press release at the following link: https://www.cnbv.gob.mx/SECTORES-SUPERVISADOS/BANCA-MULTIPLE/Prensa%20%20Sector%20Bancario/Comunicado%20de%20Prensa%2008%20Importancia%20Sistemica%20local%202025.pdf

Profitability

As of March 2025, commercial banks' profitability, measured as the ratio of 12-month net income to average stockholders' equity for the period (*ROE*), decreased slightly compared to the level recorded in the previous *Report* (Graph 80). This is explained by lower growth in net income and an increase in average stockholders' equity. Net income, in turn, was affected by higher administrative expenses, even though the risk-adjusted financial margin increased. Finally, the heterogeneity observed in the profitability levels of the system's banks suggests that those with higher profitability will be better positioned to accumulate capital if necessary.

Graph 80
Commercial Banks Profitability Components
(12-month flow)
Percent of 12-month average capital



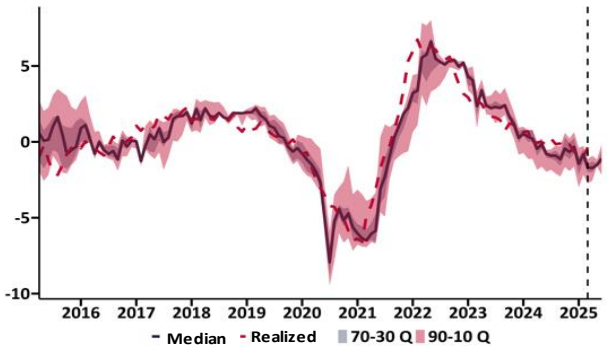
Data as of March 2025.
Source: CNBV.

Financial Indicators at Risk

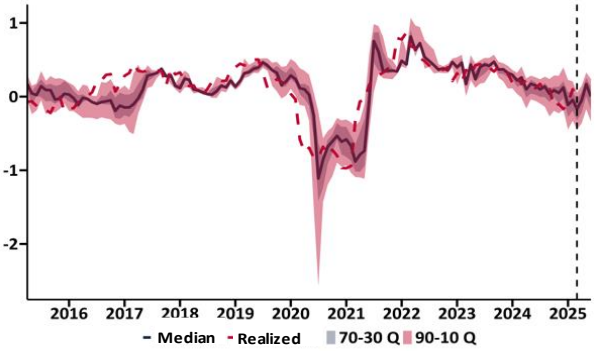
Historical information on financial indicators in the banking industry enables risks to be identified and forecasts[39] to be developed making it possible to determine which indicators are subject to greater uncertainty in their estimates, which often translates into an increase in risk levels going forward.[40]

The profitability indicators reveal that both the *ROE* (Graph 81a) and the financial margin (Graph 81b) show a slowdown in their growth, although the *ROE* has a positive projection and the margin is more uncertain.

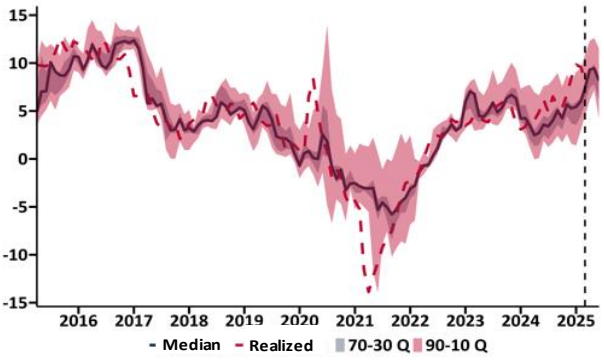
Graph 81
Three month horizon out of sample forecast
a) ROE
Percentage points



b) Net interest margin
Percentage points



c) Real credit growth
Percentage points

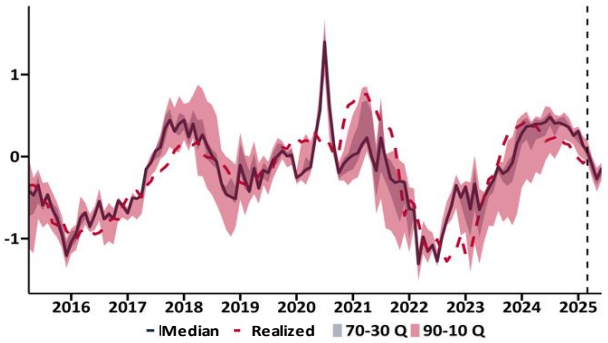


[39] The methodology used is the one described in Box 6. Risk metrics for banking and credit indicators, published in the June 2022 *Financial Stability Report.*

[40] For each of the indicators, forecasts are presented for a three-month horizon based on quantile regressions.

d) Adjusted non-performing ratio

Percentage points



Data up to March 2025 and forecasts through June 2025.
Source: Banco de México.

The portfolio growth projection (Graph 81c) shows a sustained upward trend, although with greater uncertainty, shown by its greater dispersion. Finally, the growth of the Adjusted Non-Performing Loan ratio of the portfolio (Adjusted NPL ratio) shows a slowdown in its growth (Graph 81d).

These indicators point to sustained growth in the portfolio, accompanied by a recovery in profitability and a decrease in the Non-Performing Loan ratio in the coming months, unless any unforeseen events occur that change this expected trajectory.

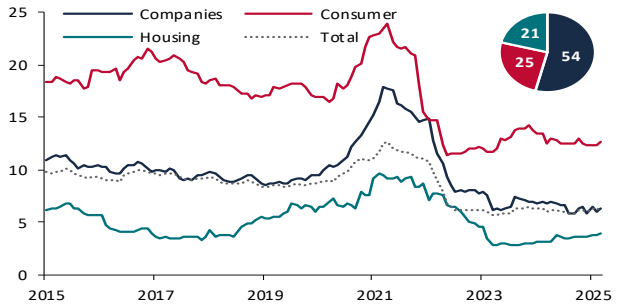
Credit risk

Banks' credit risk, measured through the Conditional Value at Risk (*CVaR*) of credit at the 99.9% confidence level as a proportion of the credit portfolio, registered an increase, driven by the increase observed in the risk of the corporate portfolio and, to a lesser extent, in the mortgage loans portfolio (Graph 82a).[41,42] Overall, both the probability and correlation of default contributed to the growth of the credit risk of the portfolios (Graph 82b).[43]

Graph 82

a) Conditional Value at Risk (CVaR) by type of portfolio [1/]

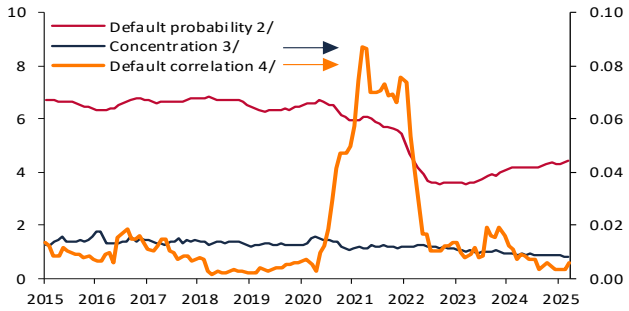
Percent of portfolio's value



Data as of March 2025.
Source: Banco de Mexico, CNBV and Credit Bureau.
1/ Using a time period of one year and a confidence level of 99.9%. The pie chart shows the total percentage of the current balance for each portfolio segment.

b) Portfolio concentration, probabilities and default correlation[1/]

Percent



Data as of March 2025.
Source: Banco de México, CNBV and Credit Bureau.
1/ Components used as inputs to compute the CVaR of the portfolio.
2/ Average default probability of the portfolio on annual horizon.
3/ Portfolio concentration measured using the Herfindahl-Hirschman Index.
4/ Average default correlation of the portfolio on annual horizon.

When considering commercial banks' credit portfolio exposures and their distribution of potential credit losses,[44] we find that the corporate portfolio is the one with the highest contribution to the overall

[41] The conditional value at risk (CVaR) makes it possible to analyze losses at the tail of the distribution, since it represents the expected value of the loss when it is greater than the VaR, which, in turn, represents the percentile that corresponds to a given confidence level in a loss probability distribution of a portfolio of risk-weighted assets subject to credit risk.

[42] *Conditional Value at Risk (CVaR)* is calculated using the "Capitalization and Credit Risk" (CyRCE) model. The main elements of this model are the probability of default for each loan, the structure of variances and covariances of potential defaults, and the structure and concentration level of the loans in the portfolio. An explanation of the model can be found in Banco de México (2006), Report on the Financial System May 2007, pp. 64- 67, and in Javier Márquez Diez-Canedo, Una nueva visión del riesgo de crédito, third edition, Limusa (2024).

[43] The probabilities and correlations of default used in the model are estimated through the observed historical default rates of loans, whose reference can be found in Banco de México (2006). "Estimated Probabilities and Correlations of Default". Report on the Financial System May 2007, Box 10, pp 66.

[44] This distribution is generated using the loss simulation methodology for a loan portfolio. Available from Banco de México (2022). "Measuring the credit risk of a portfolio through Monte Carlo simulation." Financial Stability Report June 2022, Box 7, pp 74.

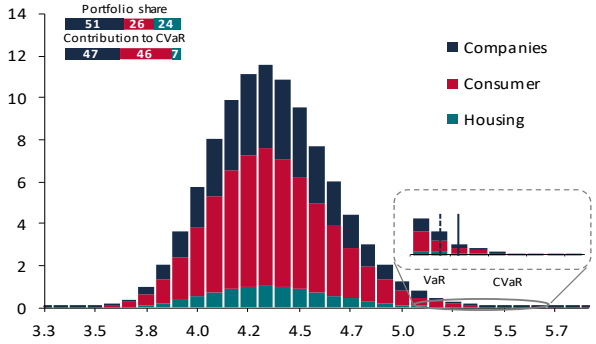
CVaR[45] (Graph 83a and Graph 83b), even though the consumer portfolio is the one with the highest level of *CVaR* relative to the value of its portfolio. The level of credit *CVaR* remained stable and limited relative to banks' regulatory capital in the aggregate, which reflects the banks' capacity to absorb unexpected losses derived from the credit default of their portfolios in an extreme scenario; however, it is important to maintain adequate origination criteria in order to prevent risks to the system from increasing.

Graph 83

a) Simulated credit loss distribution of the system

Horizontal axis: Percent of portfolio's value [1/]

Vertical axis: Percent



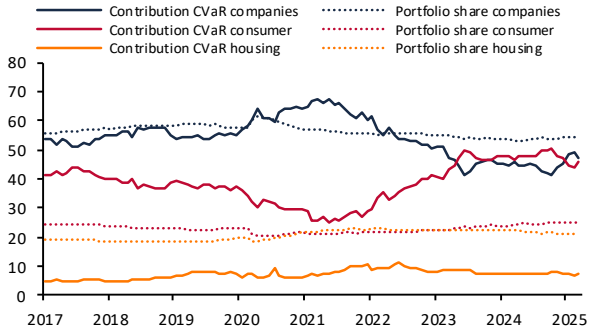
Data as of March 2025.

Source: Banco de Mexico, CNBV, and Credit Bureau.

1/ The percentage of loss for each portfolio is relative to the total loss, within each interval. The VaR and CVaR levels are 99.9%.

b) Contribution to CVaR[1/] by portfolio segment[2/]

Percent



Data as of March 2025.

Source: Banco de México, CNBV and Buró de Crédito.

1/ Annual credit CVaR at the 99.9% confidence level.

2/ Only considering the outstanding performing portfolio.

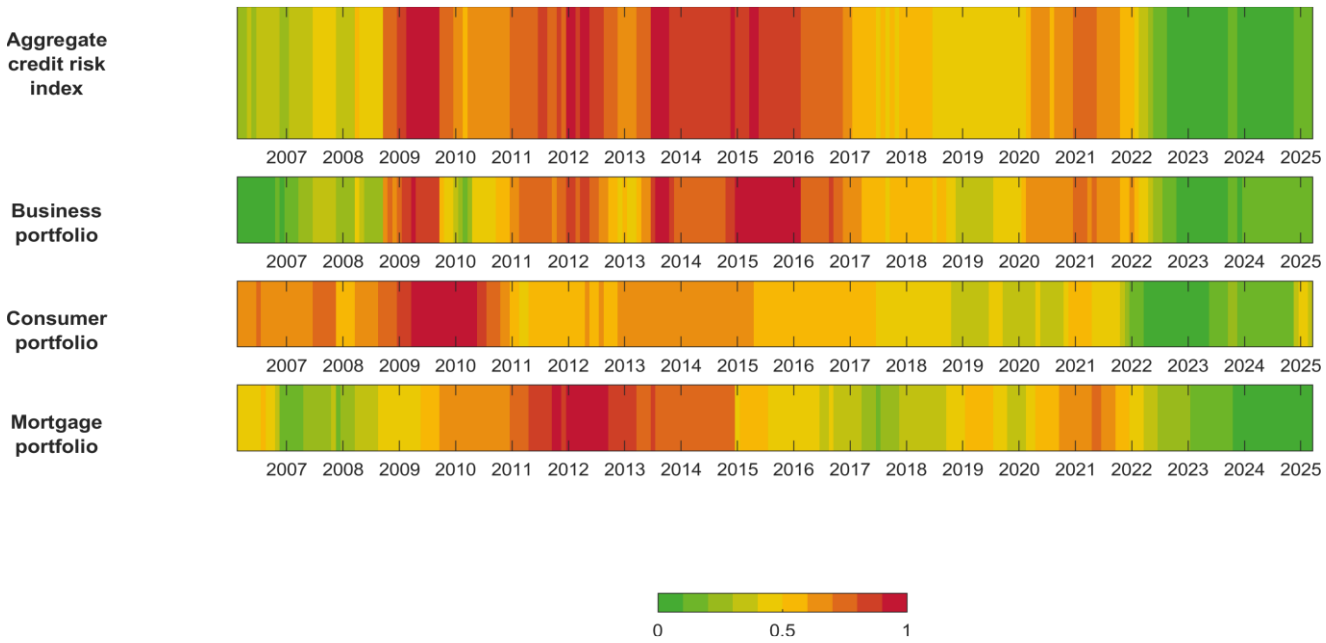
Bank credit risk map

Aggregate credit risk, as illustrated by the heat map[46] which considers both forward- and backward-looking indicators, shows that bank credit risks have remained at historically low levels. Over the past few months, the consumer portfolio showed a slight deterioration, mainly due to increased concentration; however, in March it showed a slight recovery, largely driven by more moderate growth in its portfolio. Credit risk in the business segment remained at historically low levels, with a downward trend in the Adjusted NPL ratio (Graph 84). Finally, mortgage portfolio risks decreased and have remained at low levels since 2024, supported by low LTV levels and a lower concentration in loans granted in recent months (Graph 85).

[45] The contribution to the CVaR is determined as the percentage loss of the portfolio segment to the total portfolio loss, within the extreme losses of the distribution (e.g. losses exceeding VaR).

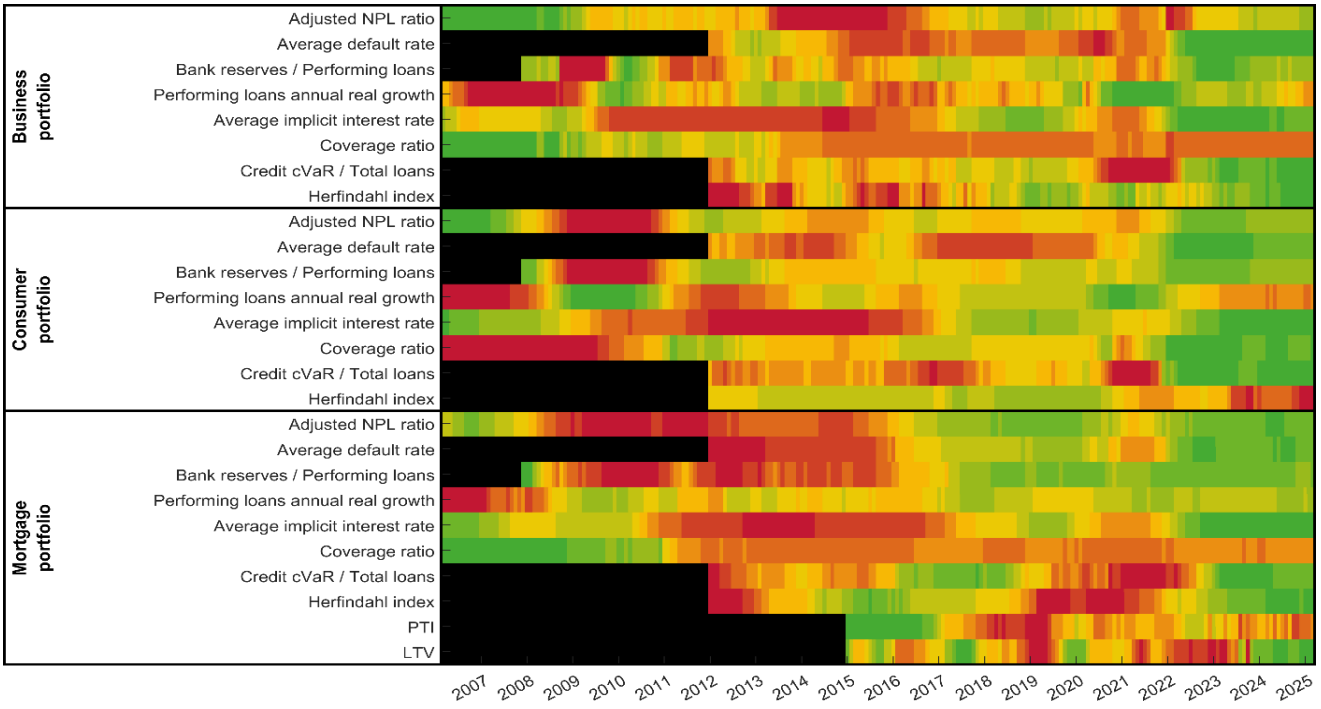
[46] For more details on the methodology used in the determination of the heat map, see: Banco de México (2024). "Mapa de riesgo de crédito bancario." Financial Stability Report June 2024, Box 4, pp. 62-63.

Graph 84
Heat maps of bank credit risk



Data as of March 2025.
Source: Banco de México, CNBV and Credit Bureau.

Graph 85
Disaggregated heat maps of bank credit risk



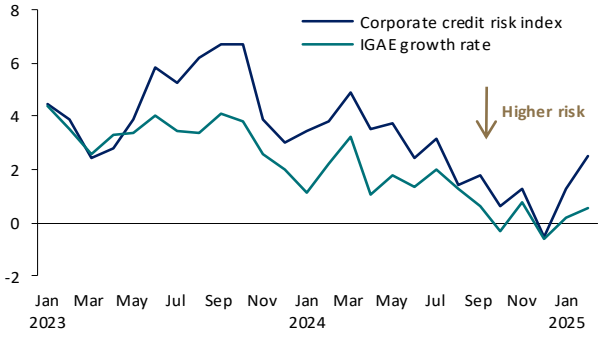
Data as of March 2025.
Source: Banco de México, CNBV, and Credit Bureau.

Banks' exposure to changes in inflation, economic activity and formal employment

This section presents a set of indicators that evaluate the influence of economic activity, formal employment and inflation on credit risk in the corporate, payroll, mortgage, automotive, personal and durable goods consumer (ABCD) loan segments.

In the corporate portfolio, the indicator reflects a higher risk when economic activity slows down or decreases, both at the aggregate level and in the sectors with the largest share of credit. Compared to the last version of this *Report*, the indicator has increased, reflecting lower credit risk (Graph 86). This occurred despite the observed slowdown in the Global Economic Activity Index (IGAE), largely due to the better performance of some sectors with a greater weight in credit than in production, such as professional services, business support and retail trade.

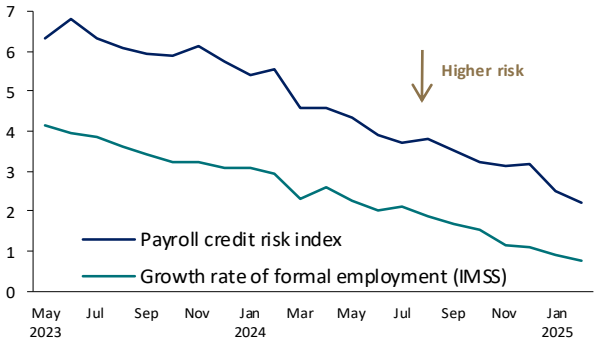
Graph 86
Corporate portfolio credit risk due to changes in economic activity
Annual variation in percent



Data as of February 2025.
Source: Banco de Mexico and INEGI.

In the payroll, mortgage and automotive portfolios, the indicator signals higher credit risk when formal employment growth slows down or decreases, both at the aggregate level and in the labor markets with a greater share of these portfolios.[47] Compared to the previous *Report*, the indicator decreased for all three portfolios, reflecting higher credit risk (Graph 87). In the mortgage and automotive segments, the decrease was smaller than the slowdown in formal employment, while in payroll the decrease was larger. This is largely due to the strong employment performance of higher-income workers, who have a greater presence in the mortgage and automotive segments than in payroll.

Graph 87
Payroll portfolio credit risk due to changes in formal employment
Annual variation in percent



Data as of February 2025.
Source:Banco de Mexico and IMSS.

In the personal and ABCD loan portfolios, the indicator captures the credit risk associated with changes in the annual inflation rate, as determined by the National Consumer Price Index (INPC). Inflation is chosen as a risk factor because a significant percentage of borrowers in these portfolios have less purchasing power than borrowers in other segments, making them more vulnerable to price increases.[48] Thus, the indicator shows higher credit risk when inflation accelerates, either generally or in the spending categories where these borrowers allocate a significant portion of their expenses.[49] Compared to

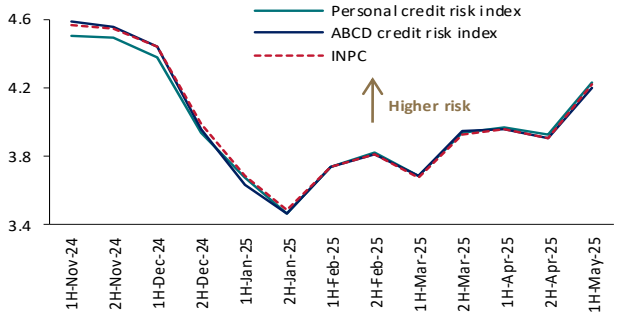
[47] To construct the formal employment indices, the share of credit in each state is obtained by gender and wage level, based on the information from workers registered with the IMSS. The threshold for high-wage formal employment is defined as the median of the historical wage distribution of borrowers.

[48] See Box 1 Inflation and non-performing loan ratio in non-revolving consumer credit in the *Financial Stability Report-December 2022*.

[49] To construct the personal and ABCD portfolio indices, the exposure of each municipality to inflation is estimated and then a national average is calculated by weighting each municipality by its share in each portfolio. The classification by object of expenditure of the INPC and economic activity by state is used, presenting disaggregated information on expenditure categories such as food, education, leisure, and housing. This classification allows for detailed state-level analysis by expenditure category. This information differs from that provided by the INPC, its core and non-core subindices, and their respective disaggregates. For example, the housing component includes generic items such as electricity and fuels in the classification by object of expenditure. However, the housing category within the core classification excludes these items, which are classified as energy category in the non-core subindex.

the previous *Report*, the personal and ABCD indicators decreased, reflecting lower credit risk, as a result of the decrease in headline inflation and in items relevant to these borrowers (Graph 88). The ABCD indicator fell more than headline inflation because: (i) borrowers in this credit portfolio spend proportionally more on food, beverages and tobacco, and (ii) the decrease in inflation in this category was greater than that of the INPC. In the personal loan segment, the decrease in the risk indicator was smaller than the decrease in headline inflation because: (i) borrowers in this segment spend proportionally more on housing; and (ii) the increase inflation in this category was higher than that in the INPC (which decreased), thereby limiting the recovery of their purchasing power.

Graph 88
Personal and ABCD credit exposure index to the INPC
Percentage points

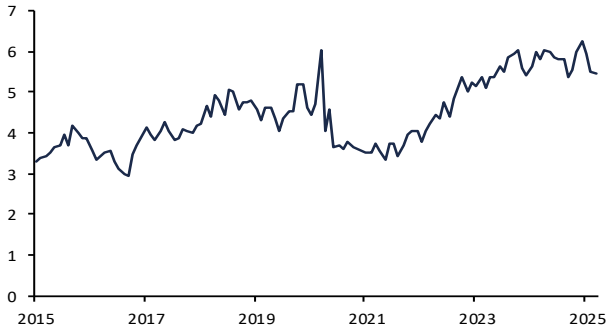


Data as of the first half of May 2025.
Source: Banco de Mexico and INEGI.

Market risk

Banks' market risk, measured through the 99.9% market *CVaR* over a one-month horizon as a proportion of net capital, increased slightly -from 5.4% in September 2024 to 5.5% in March 2025- as a result of changes in the composition of banks' portfolios towards more interest rate sensitive instruments, as well as towards positions with higher foreign exchange risk. The level of market *CVaR* is low in comparison to banks' regulatory capital in the aggregate, and indicates their capacity to absorb unexpected losses derived from the market risk of their portfolios in an extreme scenario (Graph 89).[50]

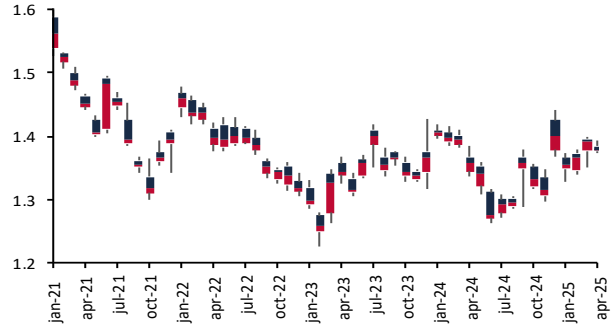
Graph 89
99.9% CVaR for commercial bank's market risk
Percent of Net capital



Data as of March 2025.
Source: Banco de Mexico, CNBV, BMV, Bloomberg and Valmer.

The sensitivity of debt instruments portfolio to changes in interest rates, measured through duration based on market information, showed a slight increase at the last date, with respect to the September 2024 level, going from 1.36 years in September to 1.38 years in April 2025. This is explained by the rebalancing of the portfolios to longer-term debt instruments. However, most of its investments are concentrated in short-term government securities, which limits its variability in the face of changes in market risk factors (Graph 90).

Graph 90
Average monthly duration of commercial bank's position
Years



Data as of April 2025.
Source: Banco de Mexico and Valmer.

Liquidity risk

Commercial banks maintain ample liquidity positions according to various metrics, and maintain levels well above regulatory minimums.

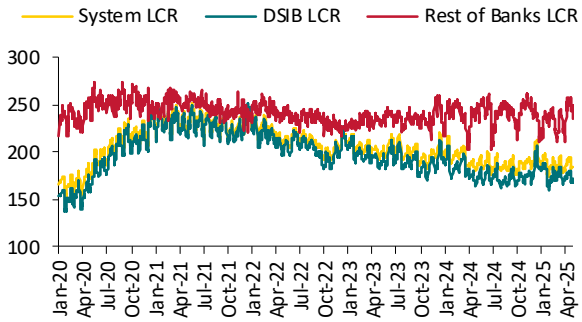
[50] The *CVaR* represents the 99.9% quantile of the loss distribution generated by historical simulation of the observed 20-day changes in risk factors since 2004, applied to the positions at the date considered. Given the number of observations, the behavior of the Conditional *Value at Risk* is almost entirely explained by changes in portfolio composition, with a marginal effect of recent changes in risk factors.

The aggregate Liquidity Coverage Ratio (LCR) of banks[51] was close to 190 percent during the period covered by this *Report* (Graph 91). Thus, the banking system as a whole has sufficient liquid assets to meet nearly twice the liquidity needs assumed under the LCR stress scenario. Individually, each bank maintained a LCR higher than the regulatory minimum (Graph 92).

Graph 91

Daily LCR of the banking system and by groups of banks

Percentage



Data as of April 30, 2025.

Source: Banco de México.

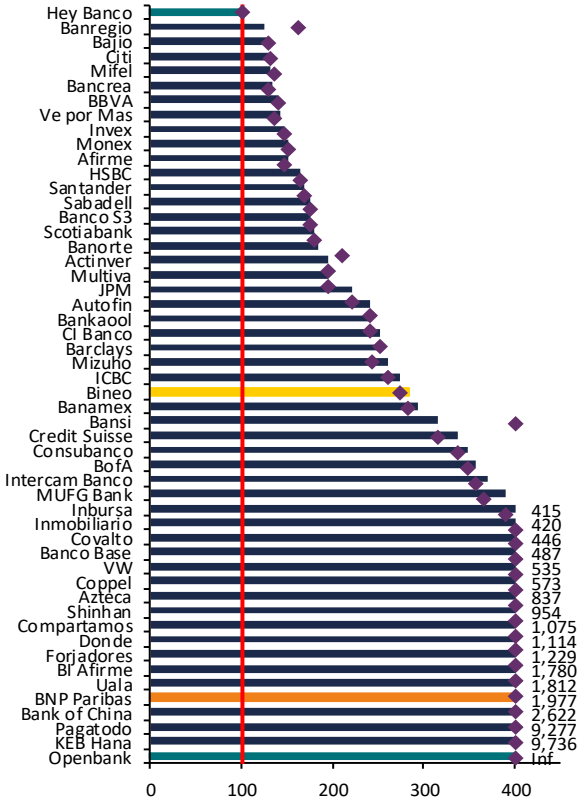
1/ As of April 2025, the CNBV designated Banco Citi Mexico as DSIB, in acordance with the CNBV Press Release 08.

2/ The assets managed by Banco Citi Mexico were part of Banco Citibanamex until 30 November 2024. As of 01 December 2024, Banco Citi Mexico was spun off from Banamex and was not classified as DSIB. In April 2025, the CNBV designated Banco Citi Mexico as DSIB. In the chart, Citi Mexico is classified within the "DSIB" group in all periods to give continuity to the series.

Graph 92

LCR of commercial banking institutions [1/]

Percentage



Data from January to March 2025.

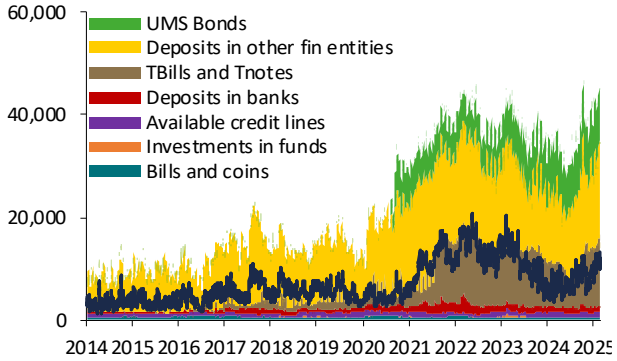
Source: Banco de México and CNBV.

1/ The graph shows the quarterly average of the LCR for each bank from January to March 2025. The bar shows the consolidated LCR and the rhombus the individual LCR. In accordance with the regulation, banks marked in dark blue must meet a minimum LCR of 100%, banks marked in orange a minimum of 90%, banks marked in yellow a minimum of 60% and banks marked in turquoise are not yet subject to a minimum requirement.

Banks also maintain a large surplus of liquid assets in foreign currency with respect to the regulatory requirement. Individually, each of the banks in Mexico meets the regulatory minimum requirement in foreign currency (Graph 93).

[51] An indicator of the bank's liquidity sufficiency to face a hypothetical severe stress event for thirty days.

Graph 93
Liquidity requirement in foreign currency and liquid assets
Millions of USD

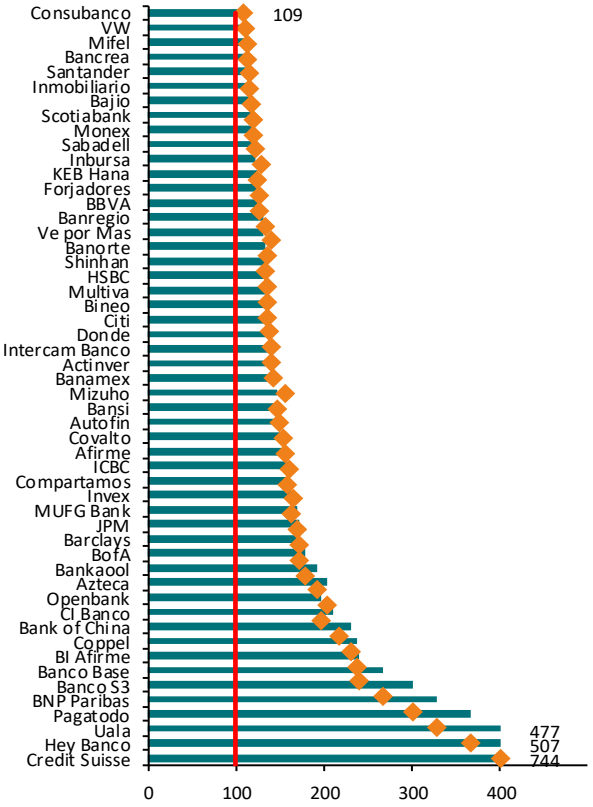


Data as of April 30, 2025.

Source: Banco de México.

The Net Stable Funding Ratio (NSFR) suggests that banks maintain a balance sheet structure with sufficient stable funding to finance their less liquid, longer-term assets. All banks maintained a NSFR above the regulatory minimum of 100% in the first quarter of 2025 (Graph 94). This indicator has remained relatively stable and above the regulatory minimum since its implementation in March 2022 (Graph 95).

Graph 94
NSFR of commercial banking institutions 1/
Percentage

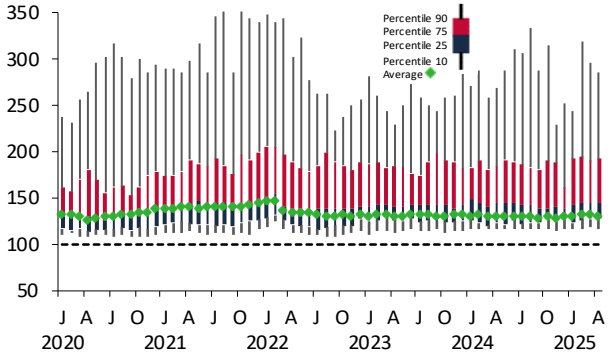


Data from January to March 2025.

Source: Banco de México and CNBV.

1/ The graph shows the quarterly average of the NSFR for each bank from January to March 2025. The bar shows the consolidated NSFR and the rhombus at a stand alone level.

Graph 95
NSFR Distribution
Percentage

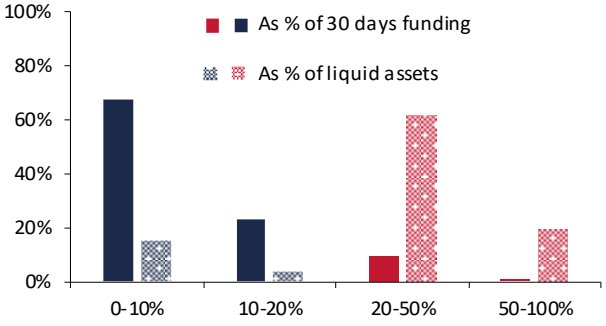


Data as of April 2025.

Source: Banco de México.

Funding concentration, another indicator of banks' liquidity risk, has remained generally stable. At the aggregate level, banks' liquid assets would be sufficient to meet the withdrawal of the top ten non-bank depositors[52]. However, some medium and small banks have a significant concentration of their funding with large depositors, which represents a risk in the event that one or more of these depositors decide to withdraw their funds. It is essential to monitor large depositors, as well as to contain the concentration in a few funding sources to prevent the risk of a sudden deterioration in the liquidity of highly concentrated institutions. Nevertheless, the level of systemic risk associated with funding concentration is low (Graph 96).

Graph 96
Funding concentration of the 10 largest counterparts maturing within 30 days [1/, 2/]
Vertical axis: proportion of total assets of the system
Horizontal axis: percentage of the funding from the 10 largest counterparts as a proportion of liquid assets and 30 days funding



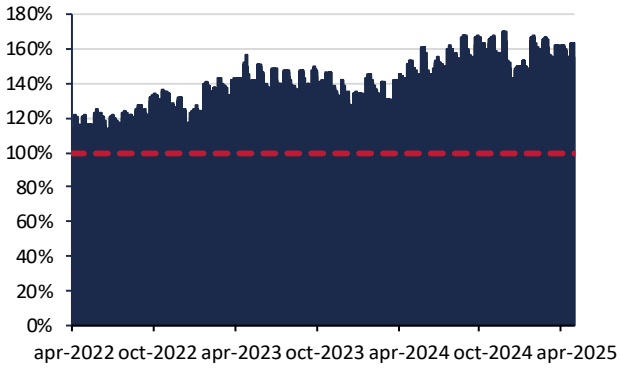
Data as of April 30, 2025.

Source: Banco de México.

1/ Concentrated counterparts consider only those funding counterparts whose total funding at the end of the month is at least 200 million pesos or amounts 0.5% of the bank's total liabilities.
2/ Observations in which the 10 largest counterparts represent more than 20% of the liquid assets or of 30 days funding are identified in red.

Another risk factor relates to the exposure to contingent liquidity needs that would arise if, for example, a considerable proportion of borrowers simultaneously tap on the credit lines granted by commercial banking institutions. The total balance of credit lines granted by banks has increased since 2022, as has the undrown portion of these lines. Although most are uncommitted lines, canceling or denying the exercise of these lines would be challenging from an operational and reputational standpoint, and some banks could face liquidity pressures, should a significant portion of these lines be exercised (Graph 97).

Graph 97
Undrawn credit lines granted by banks
% of liquid assets



Data as of April 30, 2025.

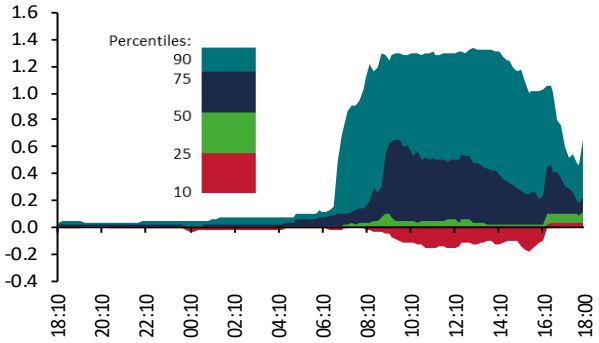
Source: Banco de México.

Regarding intraday liquidity, although all banks hold sufficient liquid assets to cover their intraday liquidity overdrafts, some small banks experience relatively large intraday liquidity needs relative to their available liquid assets. However, the net cumulative intraday liquidity position[53] suggests that, in general, banks are able to cover timely their liquidity needs during the daily peak of payment and transfer demands (Graph 98).

[52] Outflows equivalent to the 90th percentile of the historical outflows.
[53] Intraday liquidity risk is monitored through specific indicators for this purpose. One of these indicators is the net cumulative intraday liquidity position, which refers to payments received minus payments sent, measured throughout the day (intraday operation). This indicator makes it possible to identify the times when total payments sent exceed total payments received and their magnitude with respect to available liquidity.

Graph 98
Net cumulative intraday liquidity position (received payments minus sent payments) [1/]

Vertical axis: Percentage of deposits in Banxico
Horizontal axis: Hours (10 minute intervals)



Data from January to March 2025.

Source: Banco de México.

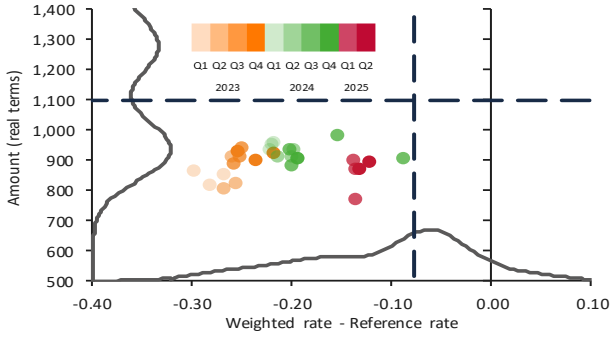
1/ Net cumulative intraday liquidity position refers to intraday payments received minus payments sent, it allows identifying times of the day with liquidity deficit and its magnitude with respect to available liquidity. The total payments sent and received are normalized as a proportion of liquidity in Banco de México (DRM, unencumbered deposits in pesos and dollars). The graph presents the percentiles of distribution per hour in 10-minute intervals, considering average observations for the quarter.

Repurchase agreements (repo) and unsecured funding[54]

The repo market remains dynamic and continues to be an important source of funding for the banking sector. During the first half of 2025, for Domestic Systemically Important Banks (DSIBs) the real-term amount of repo funding received, remained below the historical median. On the other hand, the spread between repo market funding and the reference rate narrowed, averaging around 0.13 basis points below the target rate during this period (Graph 99). For the rest of the institutions, during the first half of 2025, the volume of repo funding reached historically high levels, in real terms; while the corresponding rate spread remained stable relative to the second half of 2024, standing around 0.11 basis points below the policy rate (Graph 100).

Graph 99
Repo market [1/]
DSIBs [2/, 3/]

X axis: Basis points
Y axis: Billions of pesos



Data as of May 15, 2025.

Source: Banco de México.

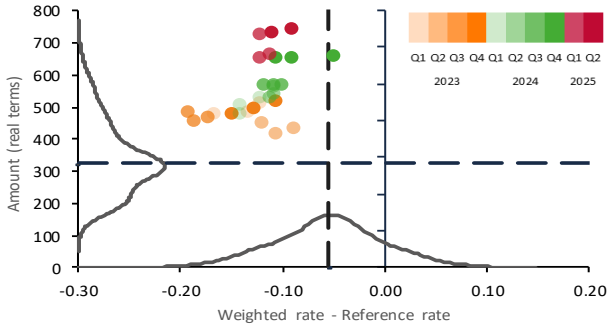
1/ Data includes all authorized counterparties and all types of collaterals.

2/ Data points correspond to the monthly weighted average of daily observations for the rate spread, and to the simple monthly average for the amount.

3/ Dotted lines correspond to medians calculated since 2008.

Graph 100
Repo market [1/]
Non DSIBs [2/, 3/]

X axis: Basis points
Y axis: Billions of pesos



Data as of May 15, 2025.

Source: Banco de México.

1/ Data includes all authorized counterparties and all types of collaterals.

2/ Data points correspond to the monthly weighted average of daily observations for the rate spread, and to the simple monthly average for the amount.

3/ Dotted lines correspond to medians calculated since 2008.

As for the type of securities that banks use as collateral in the repo market, the majority are

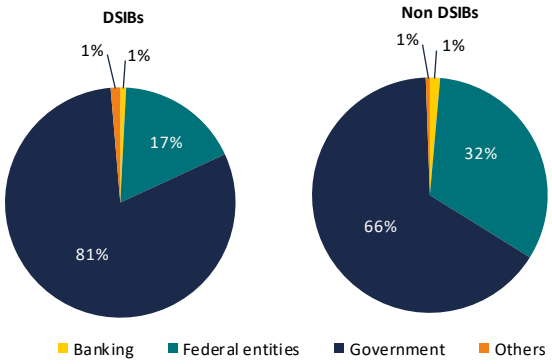
[54] Article 259 of the General Law of Credit Instruments and Transactions establishes that in a repo agreement "the buying party acquires for a sum of money the ownership of credit instruments, and undertakes to transfer to the selling party the ownership of as many other instruments of the same kind, within the agreed term and against reimbursement of the same price plus a premium. The premium remains for the benefit of the buying party, unless otherwise agreed."

government instruments,[55] although non-DSIBs use securities issued by federal entities[56] in greater proportion than DSIBs (Graph 101).

Graph 101

Collaterals in the repo market

Percent



Data as of May 15, 2025.
Source: Banco de México.

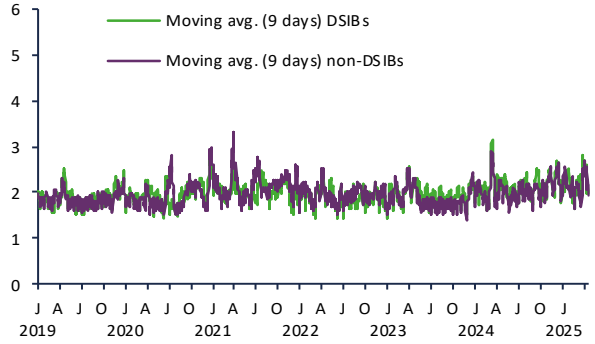
Additionally, the average term of transactions in the repo market increased slightly relative to the last quarter of 2024, reaching a weighted average of 2.2 days between January and May 15, 2025; compared to 2.1 days in 2024 (Graph 102).

It is important to monitor the evolution of the market given the recent modifications to the regulation changes to repo transactions for credit institutions.[57,58]

Graph 102

Term of securities traded in the repo market [1/]

Days



Data as of May 15, 2025.
Source: Banco de México.
1/ Weighted average by traded amount.

The main counterparties, with which banks operate in the repo market, ranked by total amount, are local legal entities,[59] followed by commercial banks. The counterparties that had the greatest impact on the increase in total average amount from 2024 to 2025 were development banks, both for DSIBs, with an increase of 164%, and for the rest of the banks, with 75% (Graph 103). Regarding interconnections between groups of institutions and counterparties within the system, repo funding from investment companies to development banks predominates, as well as from legal entities to DSIBs and broker-dealers (Graph 104).

[55] Federal government bonds: bondes D, bondes F, bondes G, udibonos, development bonds; federal government certificates; BREMS.

[56] Federal government institutions (Banking and Deposit Insurance and Resolution Agency -IPAB, its acronym in Spanish), federal public administration entities (development banks), state-owned public companies (Pemex and CFE) and state and municipal entities.

[57] Banco de México Circular 7/2024: Amendments to the rules applicable to banks, broker-dealers, investment funds, specialized retirement fund investment companies, general deposit warehouses, insurance companies, surety companies, regulated multiple purpose financial companies that maintain equity links with a credit institution and the National Agricultural, Rural, Forestry and Fisheries Development Bank regarding their repurchase transactions.

[58] See Box 2: "Rules for Repurchase Agreements: modifications to incorporate international standards and practices", Financial Stability Report - June 2024.

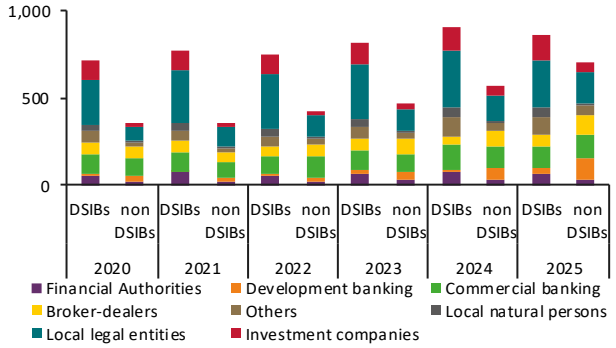
Banco de México published the amendments to the Repurchase Agreement Rules in Circular 13/2024, released in the Official Gazette of the Federation on November 14, 2024.

[59] Legal entities resident in Mexico (other than reserve funds, financial brokers, and treasury departments), economic development funds and trusts, and brokerage service companies.

Graph 103

Amount traded in the repo market by counterparties [1/, 2/]

Billions of pesos



Data as of May 15, 2025.

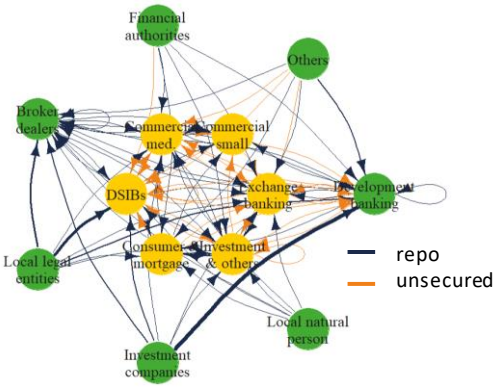
Source: Banco de México.

1/ Amounts correspond to the annual average of the total daily trades for each counterparty.

2/ Others: lessor, surety, siefores, insurance, treasury companies.

Graph 104

Interconnections in the repo and unsecured market [1/, 2/, 3/]



Data as of May 15, 2025.

Source: Banco de México.

1/ A ⟶ B: group B receives funding from group A.

2/ Arrow thickness reflects the average daily volume of transactions by group in 2025.

3/ Arrows with amounts below the 20th percentile were removed for better visualization.

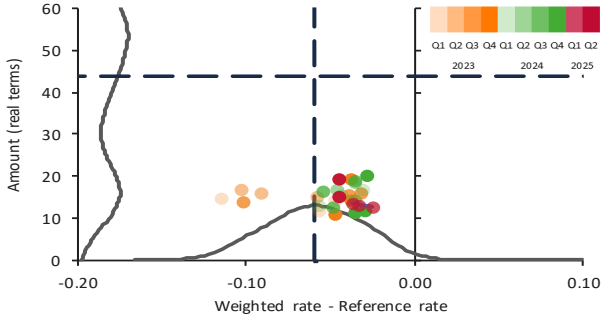
On the other hand, funding in the unsecured market remains relatively low, with amounts, in real terms, close to the lowest levels observed since 2008. As for rate spreads, they are around the historical median and have shown little variation since the previous *Report* (Graph 105).

Graph 105

Unsecured market[1/, 2/]

X axis: Basis points

Y axis: Billions of pesos



Data as of May 15, 2025.

Fuente: Banco de México.

1/ Data points correspond to the monthly weighted average of daily observations for the rate spread, and to the simple monthly average for the amount.

2/ Dotted lines correspond to medians calculated since 2008.

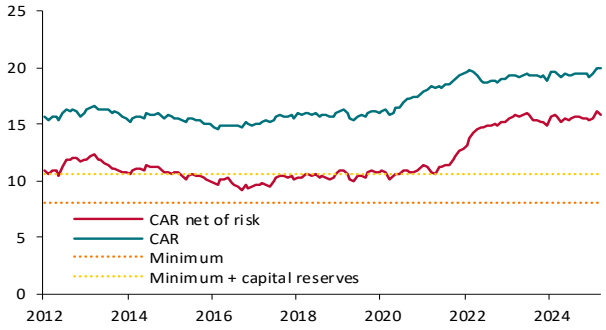
CAR and LCR at risk

As of March, most banks have sufficient capital and liquid assets to withstand stress scenarios, based on the analysis of the net-risk capital adequacy ratio (Net-risk CAR) and the Liquidity Coverage Ratio (LCR) at risk for commercial banking institutions.

The net-risk CAR of commercial banks increased with respect to the previous *Report* as a result of the increase in the system's CAR, which compensated and surpassed the effect of the increase in portfolio credit risk (Graph 106). The levels of this index for the financial system continue to be higher than the regulatory minimum, showing the banks' capacity to absorb unexpected losses derived from the credit default of their portfolios.[60]

[60] As these estimates are based on historical conditions observed to date, this indicator is a reference and not a forecast of the potential losses that could be observed in the current situation.

Graph 106
Net-risk CAR [1/]
Percent



Data as of March 2025.
Source: Bank of Mexico, CNBV and Credit Bureau.
1/ Estimated as the capitalization ratio that results from reducing the CVaR at a 99.9% confidence level, both from the net capital and risk weighted assets. This indicator assumes that the credit portfolio incurs losses in an amount equivalent to a CVaR of 99.9% and such losses are absorbed by the banks and then reflected in their capital levels without affecting reserves, and that this portfolio is weighted at 100% to determine their capital requirements.

On the other hand, according to the analysis of the LCR at risk[61], the banking system maintains a solid liquidity position. Most banking institutions, representing around 93% of the system's total assets, maintain an LCR at risk above the regulatory minimum of 100%, even under scenarios of extreme deposit outflows (Table 4). The component with the greatest negative impact in this exercise corresponds to retail deposit outflows, whose outflow factor is considerably more stressed in comparison to the factor used in the standard LCR calculation.

When the analysis is performed on an aggregate basis, the results show that the Mexican banking system holds sufficient liquid resources to withstand stress periods associated with extreme deposit outflows from the system.

Table 4
Bank groups by LCR at risk[1/]

Group	Criteria	Assets of the bank groups as a share of total commercial banks assets
1	LCR ≤ 65	4.3%
2	65 < LCR ≤ 100	2.5%
3	LCR > 100	93.1%

Data as of March 2025.
Source: Banco de México.
1/ Total assets data for commercial banks refer to those released by the CNBV at the end of March 2025.

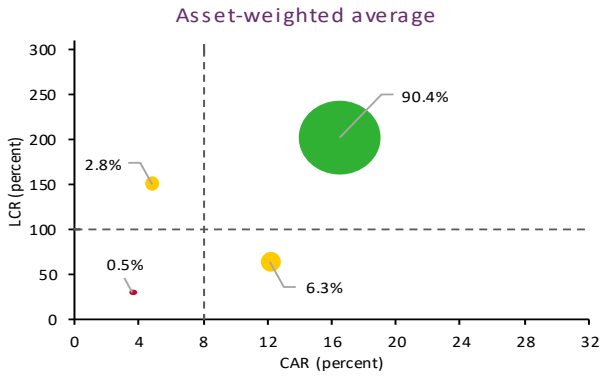
In addition, no potential second-round effects were identified; that is, no contagion is expected under the assumption that institutions falling below the regulatory minimum level in the proposed scenario stop renewing the funding they grant in the interbank repo market. On average, non-renewed funding would represent 3.0% of the total liquid assets and inflows of the institutions receiving this funding from the affected banks in the first fiscal year. Furthermore, the collateral pledged in all the observed repurchase transactions consists of highly liquid assets, so even if the volume were higher, the estimated impact would not be significant.

Finally, when jointly evaluating the results of the LCR at risk and net-risk CAR exercises, it is observed that, as of March, most of the institutions, representing around 99.5% of the system's total assets, maintained levels above the regulatory minimum in at least one of the two requirements under the stress scenarios considered (Graph 107).

[61] The purpose of the LCR at risk exercise is to evaluate whether commercial banking institutions hold sufficient liquid assets (cash and high-quality debt securities) to cover their net cash outflows during a 30-day stress period. For this purpose, outflow factors are estimated using historical data on each bank's deposits balances, based on the 95% Conditional Value at Risk (CVaR). The potential impact on the value of liquid assets is also considered under three historical scenarios, three macroeconomic scenarios (section V.1), and two climate-related scenarios (section V.3).

Graph 107

LCR at risk and net-risk CAR of commercial banks [1/]



Figures as of March 2025.

Source: Banco de México.

1/ The lines show the regulatory thresholds for the liquidity requirement (LCR = 100 %) and the minimum capitalization requirement (CAR = 8 %). The bubbles depict the total assets for the group of institutions within each quadrant, and the percentage is its proportion with respect to the commercial banks' total assets, where the centroid is the asset-weighted average. The red, yellow and green colors denote those institutions that: fail to comply both requirements; fail to comply with one of the two requirements; and comply with both requirements.

Contagion risk

This section presents the results of the contagion risk analysis[62]. This exercise uses the network of exposures between financial institutions in the interbank market to analyze the mechanisms that allow the propagation of risks and vulnerabilities to the entire financial system. Daily information is used for all exposures in the domestic financial system, as well as between financial institutions abroad[63].

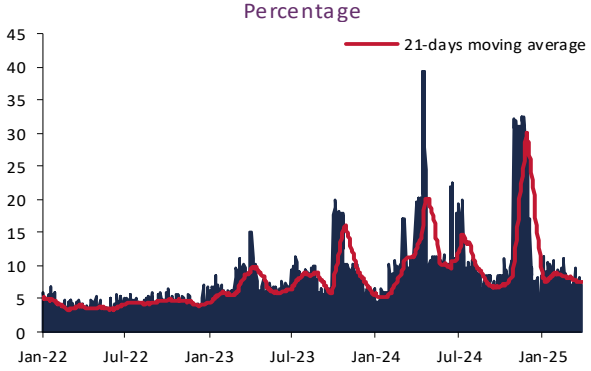
Contagion risk, measured both by the percentage of bank and broker-dealer assets involved in the worst contagion chains[64](Graph 108) and by the severity of lost assets (Graph 109), closed at similar levels to those of January 2024. Although during the last quarter of 2024 a significant increase was observed (associated with a period of high volatility), in the first quarter of 2025 the average level returned to the observed in previous months.

A recurrent element in these periods, and one that was maintained throughout 2024, is the increased number of brokers raising their exposures relative to their capital. This can be seen in the increase in the number of overexposed brokers[65] (Graph 110).

The structure of the network showed few changes during this period. It is until December 2024 that both disassortativity[66] and density show a slight decline (Graph 111), followed by a subsequent spike in all three indicators plotted. This means that, during this period, the network of exposures was less connected, but with exposures more concentrated in the larger brokers. This greater concentration in exposures is reflected in the counterfactual exercise in an increase in potential losses and in the number of banks affected in the contagion exercise. While the spike in these three indicators coincides with lower levels of contagion in relative terms.

Graph 108

Percentage of bank's and brokerage firm's assets involved in the worst contagion chains



Data as of March 31, 2025

Source: Banco de México.

[62] Interbank contagion risk refers to the possibility that the problems faced by a bank in meeting its financial commitments may be transmitted to other banks, either directly or indirectly.

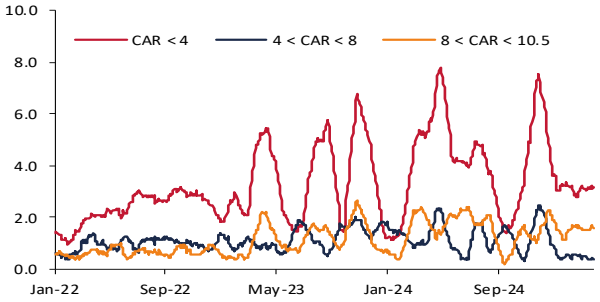
[63] It considers information on exposures in the interbank network, originated by: (i) the purchase and sale of securities; (ii) deposits and loans; (iii) market transactions, such as derivatives and repurchase agreements; and (iv) foreign currency purchase and sale transactions.

[64] To determine which are the worst contagion chains, a counterfactual exercise is carried out to evaluate the impact that the bankruptcy of each of the brokers analyzed would have on the financial system. The worst contagion chain is the one in which the most losses are observed.

[65] A broker is overexposed if the total of its inter-financial exposures exceeds the amount of capital it has available to absorb such losses, without remaining below the regulatory minimum.

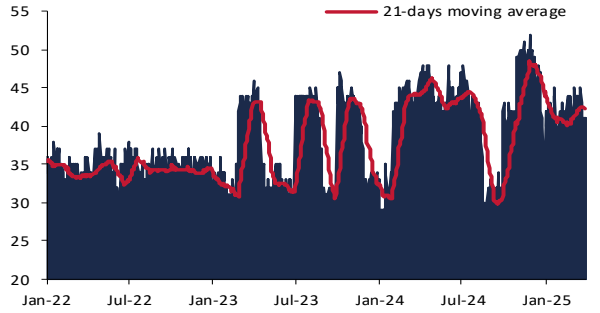
[66] *Disassassortativity* is defined as a greater propensity for brokers, generally not very interconnected, to seek greater relationships with highly interconnected brokers, suspending interrelationships with others with little interconnection.

Graph 109
Number of banks affected in the worst chains of contagion by final CAR Levels[1/]
Number



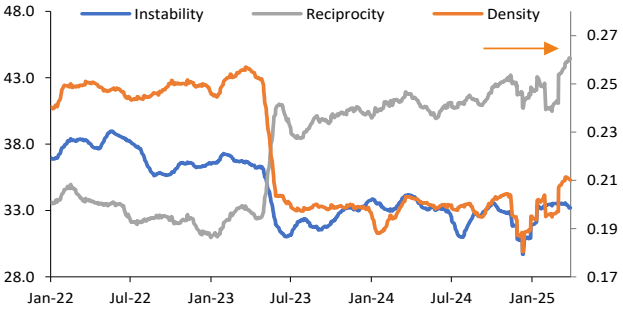
Data as of March 31, 2025
Source: Banco de México.
1/ The graphed series relates to the simple 21-days moving average of the original series.

Graph 110
Number of banks and brokerage firms overexposed
Units



Data as of March 31, 2025
Source: Banco de México.

Graph 111
Measures of the interfinancial exposure network [1/]
Percent



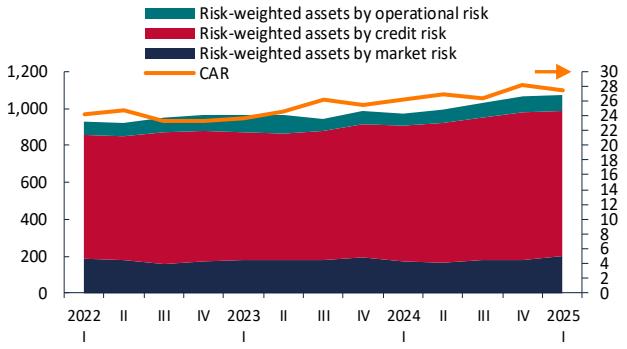
Data as March 31, 2025
Source: Banco de México.
1/ The graphed series relates to the simple 21-days moving average of the original series.

IV.3.2. Development banks and other financial institutions

As of March 2025, the development banks system[67] remained financially sound. The system reflects a favorable evolution in the main items of the financial statements, including a positive net income, a growing capital adequacy rate (CAR) and a higher financing balance.

As of the same date, development banks had comfortable capital levels with a CAR of 27.5%, which represents a level 121 basis points (bps) higher than that recorded in March 2024. Net capital increased 15.4% annually as a result of the profits obtained as well as capital contributions; meanwhile total risk-weighted assets increased 10.3% in the last year, mainly due to the increase in credit and market risk-weighted assets (Graph 112). It is worth noting that CAR has maintained a growing trend in recent years due to the constant generation of profits.

Graph 112
Development banks Capital Adequacy Rate
Left axis: billions of pesos
Right axis: percentage



Figures as of March 2025.
Source: CNBV.

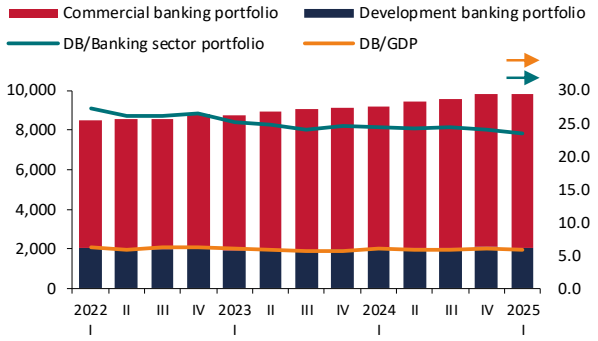
At the end of the first quarter of the year, the development banks system registered a balance of direct and induced financing[68] of 2,058 billion pesos (Figure 2), equivalent to 23% of total financing in the banking sector and 5.8% of GDP. In the last year, its significance in the sector decreased by 90 bps, while

[67] Refers to the 6 development banks (Bancomext, Banco del Bienestar, Banjercito, Banobras, Nafin and SHF) and FIRA.

[68] The development banks and other financial institutions fulfill their mandate by: a) granting financing through direct credit (first and second-tier credit) and induced credit (provision of guarantees), which refers to the amount of final credit that has a percentage of guarantee coverage; b) the operation of special development programs; c) technical assistance; and d) operations as a financial agent.

with respect to GDP it decreased by 13 bps (Graph 113).

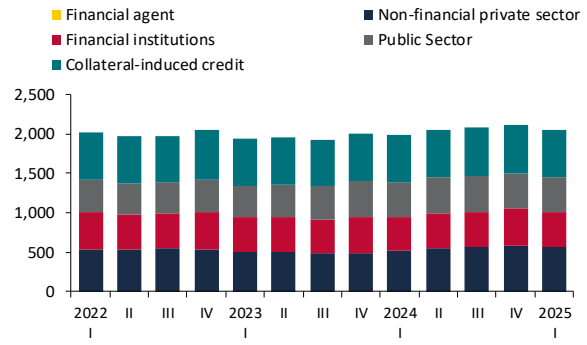
Graph 113
Development banking system significance within the banking sector
Left axis: Billions of pesos
Right axis: percentage



Figures as of march 2025.
Source: CNBV.

The balance of development banks' financing (direct and induced) registered an annual growth of 3.7% real; in comparison, the balance of commercial banks grew by 8.4% real. First-tier credit grew by 2.5% in real terms compared to the previous year, while second-tier credit and induced credit grew by 7.8% and 2.6% in real terms, respectively (Graph 114). Financing is made up of 70% direct credit and 30% induced credit through guarantees.

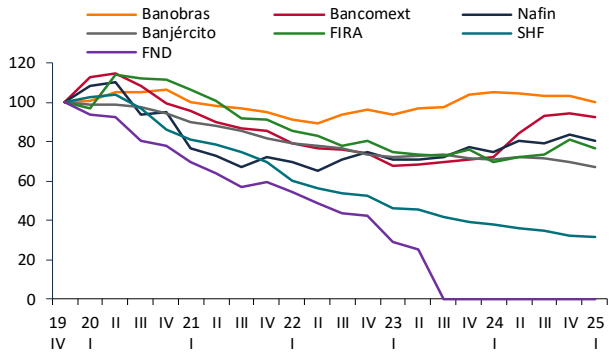
Graph 114
Evolution of loan balances and induced credit balances from development banking system
Billions of pesos



Figures as of march 2025.
Source: CNBV.

The total portfolio of direct credit grew by 4.1% in real terms in the last year; however, there was a mixed performance amongst institutions. Bancomext and FIRA recorded the largest annual increases of 28% and 10%, respectively, mainly due to higher loan placements and Mexican peso-us dollar exchange rate depreciation; in contrast, the credit portfolio of Banobras decreased by 5% in real annual terms and that of SHF by 17% due to a downwards trend in credit placement (Graph 115).

Graph 115
Evolution of loan portfolio by institution
Index (December 2019 = 100)

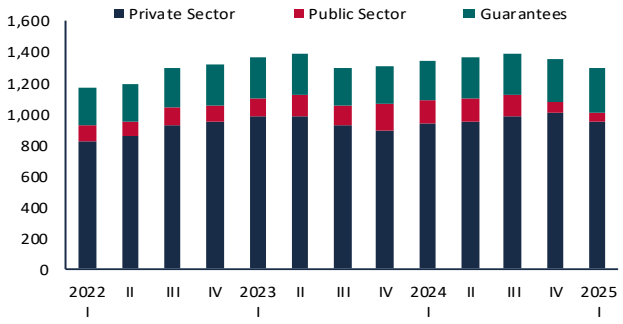


Data as of March 2025.
Source: CNBV and Banco de México.

As of March 2025, credit induced by guarantees increased by 2.6% in real terms over the last year. This is explained by the increase in the balances recorded in Nafin, Bancomext and FIRA, which was offset by the decrease recorded in Banobras. Induced credit represented 2.3 times the contingent balance.

The placement of credit and guarantees, defined as the amount dispersed in the last 12 months, presented to March of 2025 a real annual contraction of 3.6% explained by the lower placement of credit to states, compensated by a higher amount of credit to private companies (Graph 116). It is worth highlighting the 49% real annual increase in the total amount of credit granted by Bancomext and a 66% decrease in Banobras.

Graph 116
Loan and guarantee placement flows from development banking system (12M)
Billions of pesos



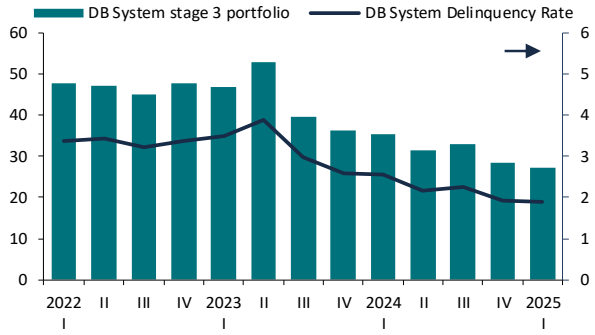
Data as of december 2024.
Source: CNBV and Banco de México.

The concentration of the development banks' loan portfolio in borrowers is relatively low; indicators have remained at similar levels in recent years.[69] As of March 2025, 90% of the portfolio was concentrated in the highest regulatory credit ratings (A1/A2 CNBV scale).

As of March 2025, the balance of the stage 3 portfolio[70] stood at 27,193 million pesos, representing a real annual contraction of 23%. This was mainly due to the reclassification to stage 1 portfolio of some borrowers, the settlement of some transactions, and the application of reserves (portfolio write-offs) in Nafin and Bancomext. It should be noted that 71% of the stage 3 portfolio was concentrated in 8 counterparties.

The delinquency rate for the development banks system was 1.88%, 67 bps lower than that recorded in March 2024 (Graph 117). As a reference, the rate of the commercial banks business portfolio reached 1.39% on the same date.[71] Preventive reserves for credit risks increased by 6.5% in real terms in the last year, explained by higher portfolio balances and changes in the expected loss.

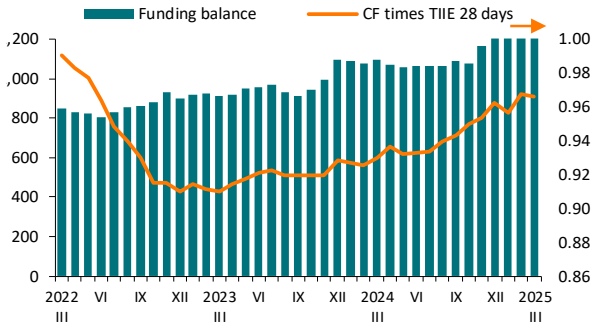
Graph 117
Evolution of "Stage 3" portfolio from development banking system
Left axis: billions of pesos
Right axis: percentage



Data as of march 2025.
Source: CNBV and Banco de México.

Funding remained at stable levels. The main sources of funding for the development banks were notes with yields payable at maturity (PRLV) and securities issued with a 67% and 27% share, respectively. Eighty-five percent of funding had term to maturity of less than three years, while the cost of funding was below the 28-day TIIE (Graph 118).

Graph 118
Development banks funding evolution
Left axis: billions of pesos
Right axis: times



Figures in current prices.
Source: Banco de México.
CF: Cost of funding in times TIIE 28 days times (weighted average).

[69] The Herfindahl-Hirschman Index in the aggregate was 97, where the highest levels among development banks correspond to SHF with 394 and Banobras with 294; the value of the HHI varies between 0 and 10,000, where a higher value indicates greater concentration. Thus, exposure to the ten borrowers with the largest balances per institution represents between 18% and 57% of its total portfolio, as well as between 1.0 and 3.3 times its core capital.

[70] With the entry into force of IFRS9 by 2022, the loan portfolio is now classified in 3 stages, according to the level of risk and impairment: in general terms, stage 1 incorporates those loans that are less than 30 days past due; stage 2 those that are between 30 and 89 days past due; and stage 3 those that are 90 days or more past due. For more information, see: Box 5 "Adoption of IFRS9 accounting criteria", from the Financial Stability Report, June 2022.

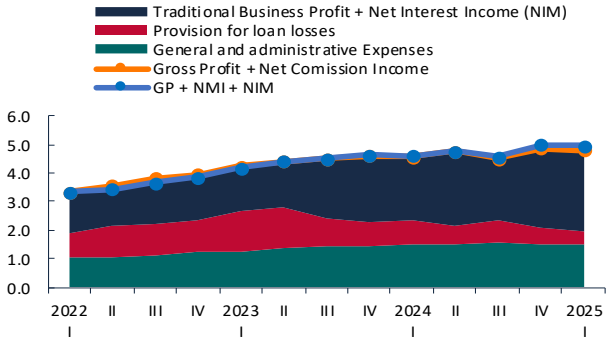
[71] The data for commercial banks also includes the loan portfolio of SOFOMES regulated as having an equity link with a bank, whether they are subsidiaries of the latter or not.

Liquidity conditions in development banks and other financial institutions have remained stable. Internal liquidity indicators remain within the established limits, maintaining a healthy risk profile.[72]

In terms of market risk, Banobras, Nafin and Bancomext accounted for 75% of total development banks' investments in securities. The market position has remained stable over the last few years, with 80% of the securities having a term to maturity of less than 3 years and most of the investments in government securities at reviewable rates.

The financial margin as of March 2025 was 3.3% lower in real terms compared to the previous year, mainly explained by lower interest income from market operations. Interest income is sufficient to cover interest expenses and the creation of allowances for loan losses (Graph 119).

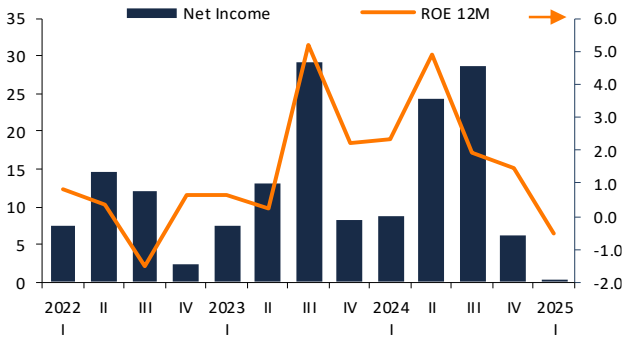
Graph 119
Performance indicators (proportional to Net Productive Assets)
Percentage



Data as of march 2025.
Source: CNBV and Banco de México.
Cumulative figures from the last 12 months.

As of the same date, the development banks system reported a net income of 391 million pesos, 95.5% lower in real terms compared to March 2024 due to the increase in the amount of capital withdrawals by the Federal Government.[73] The system's annualized ROE indicator stood at -0.51% (Graph 120).

Graph 120
Net income and ROE (12M) from development banking system
Left axis: billions of pesos
Right axis: percentage



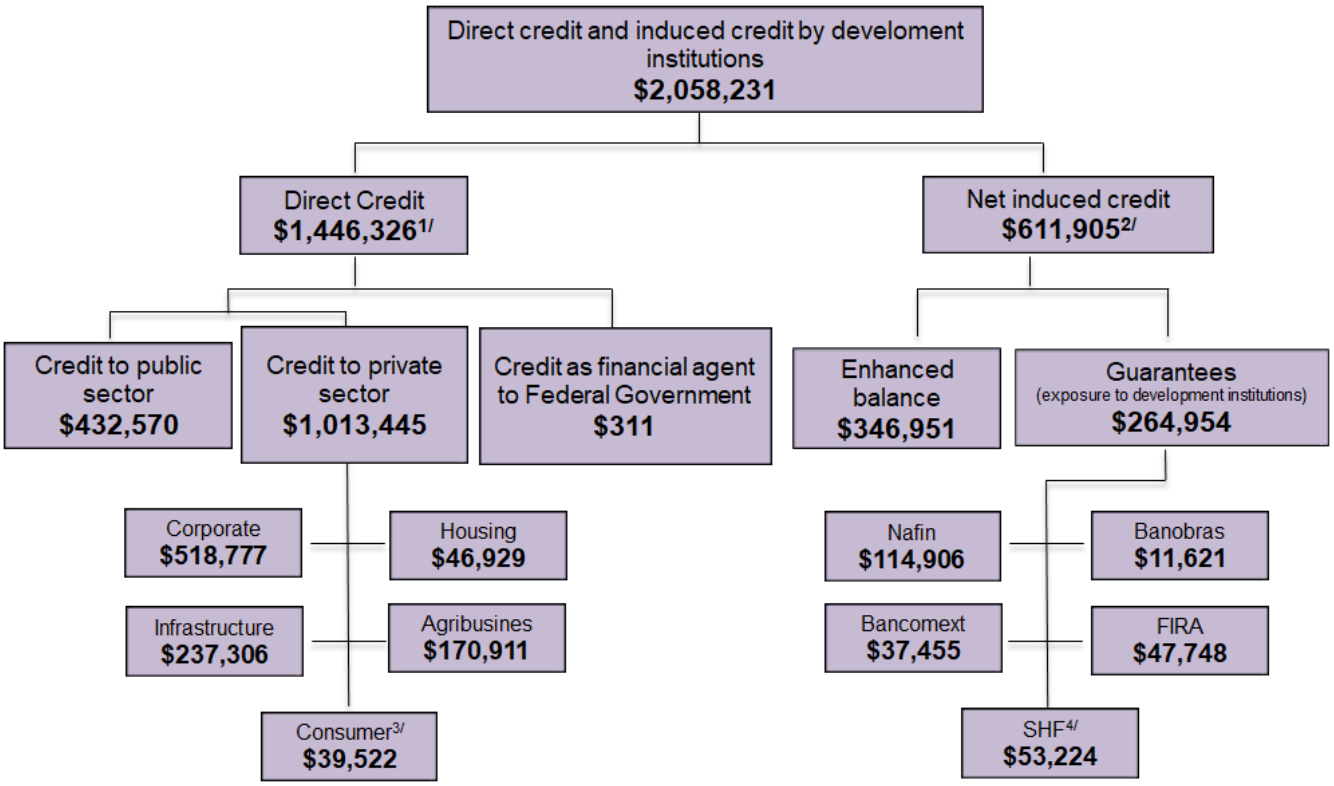
Data as of march 2025.
Source: CNBV and Banco de México.

It is worth mentioning that the development banks are currently defining their six-year institutional programs, which establish the credit placement and attention priorities for the coming years.

[72] The Liquidity Coverage Ratio is not applicable to development banks. However, development banks repurchase it to the CNBV.

[73] The federal government's amount of resources tapped (known as aprovechamientos) is usually made in December. It is noteworthy that, as of March 2025, the amount of resources tapped to the development banks system was 13,500 million pesos more than 5 times the amount tapped as of March 2024.

Figure 2
Direct credit and credit induced by guarantees granted by development banks and other financial institutions
Million pesos



Data as of March 2025
Source: Banco de México.
1/ Amount of credit on the balance sheet of development institutions.
2/ Net induced credit refers to the total credit balance granted by various private financial brokers that is partially guaranteed by development banks and FIRA, and that is not funded by development institutions.
3/ Consumer credit portfolio is comprised of credit to the Mexican armed forces serviced by Banjercito.
4/ Includes guarantees from SHF's insurance company Seguros de Crédito a la Vivienda (SCV).

IV.3.2.1. Infonavit and Fovissste

Infonavit

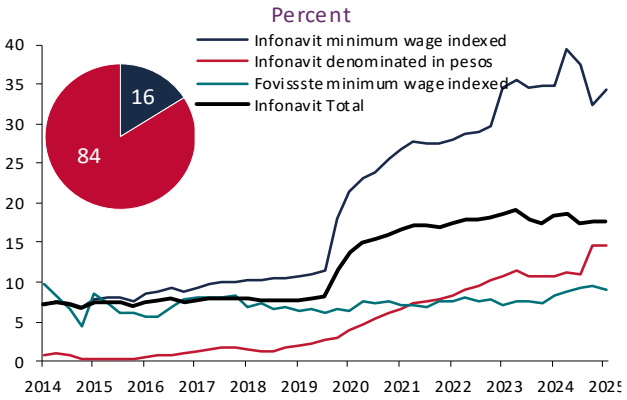
Infonavit is the main provider of housing financing in Mexico. It grants mortgage loans to its claimants through fixed and differentiated interest rates based on their income. In addition, it manages the resources of the national housing fund for formal employees and is part of the retirement savings system, as it oversees the investment of funds held in employee claimants' housing subaccounts.[74]

As of March 2025, the real annual growth rate of Infonavit's total portfolio showed a slight increase compared to the level observed in the previous *Report* (data as of September 2024). The performing housing portfolio (stage 1 and stage 2), which had shown contractions from November 2019 through early 2024, recorded positive growth in the last quarter of 2024 and the first quarter of 2025. Meanwhile, the balance of the non-performing housing loan portfolio (stage 3) has declined since the previous *Report*.[75]

[74] See Retirement Savings Systems Law and Infonavit Law.
[75] In January 2024, amendments to the Accounting Provisions applicable to development agencies, including Infonavit, issued by the CNBV came into effect, which changed the classification of the loan portfolio and established the recording of the portfolio in risk stages. Therefore, the accounting information of the loan portfolio for 2024 is not strictly equivalent to that of 2023. The adjustments made to the accounting criteria as part of the process of adopting the international standard

The non-performing loan ratio of Infonavit's housing portfolio increased slightly (0.27 percentage points) at the end of March, compared to the figure recorded in the previous *Report*. This increase is mainly explained by a greater increase in the non-performing loan portfolio balance relative to the growth of the performing portfolio. Infonavit continues its program to convert its portfolio denominated in multiples of minimum wage (VSM, for its acronym in Spanish) to pesos, so that the former represented at the end of December 2024 around one-sixth of its total portfolio. Between September and March 2025, both the performing and non-performing loan portfolios in VSM were decreased (Graph 121). In addition to the ongoing conversion programs, a decree was published last November stating that the outstanding balances of VSM portfolios (and monthly payments) would no longer be adjusted due to indexation effects from inflation or changes in the Infonavit Mixed Unit (UMI, its acronym in Spanish). This measure will contribute to VSM-denominated loans gradually becoming a smaller share of the total portfolio.[76]

Graph 121
Non-performing Ratio of Infonavit and Fovissste's Mortgage Portfolio [1/ 2/]



Data as of March 2025.

Source: Infonavit and Fovissste.

1/ The non-performing loan ratio is defined as the ratio of non-performing loans over the total portfolio.

2/ Fovissste's total portolio is minimun wage indexed.

The Infonavit's Housing Fund (FANVIT, its acronym in Spanish) is a fund that seeks to invest a proportional share of the savings of Infonavit claimant employees that have not yet been used for housing solutions. As of March 2025, 88.6% of Infonavit's available cash was managed under the FANVIT investment regime, while the fund's total assets represented 31.7% of Infonavit's total assets. As of September 2024, FANVIT recorded its highest yield level since its creation in 2014 (18.9%). By March 2025, however, the yield had declined to 14.65%.

The coverage ratio for stage 3 credit risk portfolio reserves stood at 77.2%, an increase of 1.9 percentage points since the previous *Report*. Infonavit's profitability, measured by the ROE, decreased slightly at the end of March 2025, falling to 23.4% from 25.7% at the end of September 2024.[77] This slight decrease was mainly driven by lower net interest income, despite a slight increase in the financial margin adjusted for credit risks. In addition,

known as IFRS9 adjust, among other aspects, the classification of the loan portfolio according to the risk perception and level of impairment of the loans, as well as the creation of reserves related to the remaining term of the obligations that present certain impairment. In particular, the classification of performing and non-performing loan portfolios is eliminated and a classification by credit risk stages (stage 1, stage 2 and stage 3) is established. In addition, for each stage, a line item of portfolio in extension status is included, whereas previously this type of portfolio was only part of the performing portfolio. In its Resources and Obligations statistics, Banco de México maps the information and, as in the case of commercial banks and other brokers that adopted the aforementioned accounting criteria in 2022, the sum of stage 1 and stage 2 portfolios is considered as outstanding, and stage 3 portfolios are considered as non-performing loans.

[76] The annual update of loans originated in minimum wages is adjusted by the lesser of the percentage increase in the minimum wage and the percentage growth of the units of measurement of updating (UMA, its acronym in Spanish), with the Infonavit Mixed Unit (UMI, its acronym in Spanish) being the monetary reference that captures such minimum. By 2025, minimum wage loans will be updated at a rate of 0.00%, so the value of the UMI for this year will be $100.81 pesos per day. See link.

[77] In March 2024 the *ROE* was 4.46%.

there was also a decline in net fee income and an increase in non-recurrent operating expenses over the same period. Regarding solvency, its CAR stood at 12.3% at the end of March 2025, indicating that Infonavit has sufficient reserves and equity to face potential losses from non-performing loan portfolios.

The most significant risk for Infonavit continues to be its borrowers' unemployment. In such cases, borrowers' employers are unable to make direct payroll deductions and the credit risk of the portfolio depends on the borrowers' willingness to pay once the loan extension scheme has been exhausted.

Finally, in February 2025, the reform to the Infonavit Law was published. This reform introduces the possibility for Infonavit to carry out lease-purchase and housing construction operations through a specialized subsidiary company. Also, changes were made to the composition of Infonavit's governing bodies, as well as to the guidelines related to the Institute's supervision and oversight, among other aspects.

Fovissste

At the end of March 2025, the balance of Fovissste's total loan portfolio showed an increase compared to the previous Report. The non-performing loan ratio of the housing portfolio declined relative to the previous *Report* (Graph 121). This decline was driven by growth in the performing portfolio, while the non-performing loan portfolio contracted in real terms.[78] Notably, between September and March 2025, the balance of stage 1 loans increased slightly, stage 3 loans declined marginally, and stage 2 loans rose by 30%. In addition, the portfolio under loan extension, due to unemployment, contracted in recent months after recorded significant growth at the beginning of 2024.

Fovissste also holds a portfolio denominated in VSM and seeks to convert it to pesos. To this end, it has implemented a program that offers two restructuring options to convert loans' outstanding balance in UMAs to pesos for workers whose employment status is active paying into the Fund- and whose credit situation places them in the ordinary repayment regime or, if applicable, are pensioners. As of March 2025, 2,190 loans had been restructured from UMAS to pesos, representing 3.7% of the historical balance at the time of restructuring; the VSM loan portfolio has an outstanding balance of 770.3 million pesos as of the same date.

Fovissste faces several challenges. One of them is the recovery of debts from contributions collected by public sector employers by direct discounting from their employees' payroll but owed to Fovissste and resulting in a non-performing status of these loans for the borrowers. Additionally, there is a need to improve out-of-court collection mechanisms, due to the conditions of the existing solution products, which limit borrowers' access to benefits for regularizing or settling their loans.[79]

The reserve coverage indicator has increased since the previous *Report*. It exceeds 100 percent, indicating that the level of reserves is sufficient to cover more than the total stage 3 portfolio. Moreover, the profitability indicator rose in March and remains in positive territory, although it continues to show high variability. Finally, while Fovissste does not have its own equity, it holds ample reserves to cover potential losses in its non-performing loan portfolio.

IV.3.3. Siefores, welfare pension fund, and investment funds

Siefores

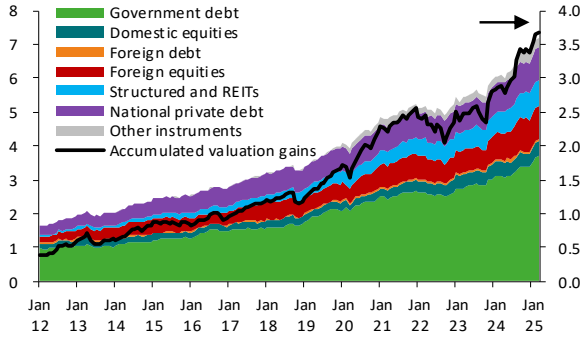
Siefores continue to be the main institutional investors in the country, with an investment portfolio composed mainly of government securities, foreign and domestic private securities.

Between September 2024 and March 2025, the Siefores presented capital gains in their investment portfolios, mainly as a result of an increase in the market value of their positions in government securities and foreign equities (Graph 122).

[78] As in the case of Infonavit, as of 2024 the accounting provisions applicable to development agencies, including Fovissste, issued by the CNBV, changed the classification of the loan portfolio and establish the recording of the portfolio in risk stages. In particular, the classification of performing and non-performing loan portfolio is eliminated and a classification by credit risk stages (stage 1, stage 2 and stage 3) is established.

[79] See "Programa de labores del Fovissste 2025", pp. 65.

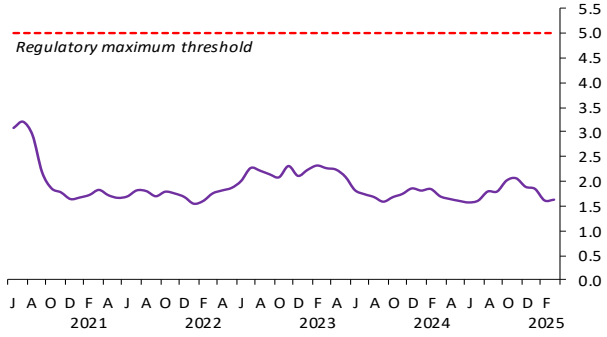
Graph 122
Siefores' portfolio and accumulated capital gains
Right axis: Accumulated flows in trillions of pesos
Left axis: Balances in trillions of pesos



Data as of March 2025.
Source: CONSAR.

Consistent with the increase in capital gains obtained by the Siefores in the first quarter of 2025, the risk level of their portfolios remained within controlled ranges. This behavior is reflected in the Tracking Error, which measures the discrepancy between the investment trajectory established by the fund managers with respect to the observed trajectory (Graph 123).

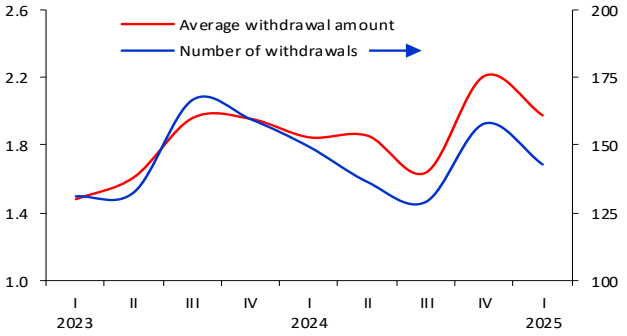
Graph 123
Tracking error [1/]
Percentage



Data as of March 2025.
Source: Banco de México with data from CONSAR.
1/ In the twenty-second provision of the General Provisions that establishes the investment regime to which Siefores must be subject, the regulatory threshold for the tracking error is 5%.

On the one hand, in a context of economic slowdown, both the amounts of withdrawals due to unemployment and the number of people who have exercised this right registered an increase with respect to what was observed between March and September 2024. Although the amounts of withdrawals due to unemployment continue at relatively high levels, they represent a small proportion of the resources managed by the Siefores (Graph 124).

Graph 124
Average number of unemployment withdrawals and total unemployment withdrawal amount
Right axis: Thousand of number of withdrawals
Left axis: Millions of pesos in real terms



Data as of March 2025.
Source: Banco de México with data from CONSAR.

As of the amendments made at the end of 2020 to the Social Security Law and the Retirement Savings Systems Law, a progressive increase in employer contributions to the individual retirement accounts of working people was established, beginning in 2023; thus, by 2030 total contributions will reach an equivalent of 15% of the base salary. Within this framework, contributions increased from 6.5% of salary in 2022 to 9.5 % in 2025. The increase in employer contributions is one of the elements that have contributed to the increase in assets managed by the Afores.

On the other hand, a decrease in the number of accounts managed by the Afores was observed as of the second half of 2024, this is due to purging processes that the Afores have carried out in accounts that were determined to be empty (due to account holders retiring or being transferred to the Pension Fund for Welfare). It should be noted that this does not represent an impact on Afores' assets, which maintained a growing trend in the first quarter of 2025.

On the other hand, on March 7, 2025, the first regular meeting of 2025 of the Technical Committee of the Pension Fund for the Welfare Fund was held. During the meeting, said collegiate body approved the reports corresponding to the fourth quarter of 2024, which present an overview of the Fund's financial situation, including its results, associated risks and

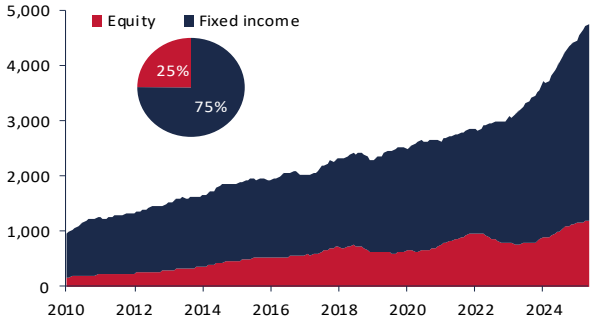
data related to contributions and the transfer of resources to the social security institutes. Among the items mentioned, it is worth noting that in the fourth quarter of 2024, the Fund made deliveries of resources for the payment of pension supplements for 28.4 million pesos and for the return of resources for 1,174 million pesos.[80] The Technical Committee was also informed by the Fund's Technical Secretariat on the progress made in the process of contracting the actuarial valuation of the Fund's assets.

Investment Funds

The sector of investment funds continues to grow under orderly operating conditions. The liquidity of the system seems sufficient to meet hypothetical periods of high redemptions. However, for some funds, the composition of their investment portfolios, in terms of their liquidity, is not fully aligned with the characteristics of their redemption practices.

As of May 15, 2025, the investment funds system was comprised of 249 fixed income funds and 385 equity funds. Total assets under management amounted to 4.7 trillion pesos (Graph 125), representing a 7.7% increase in comparison to the end of 2024.

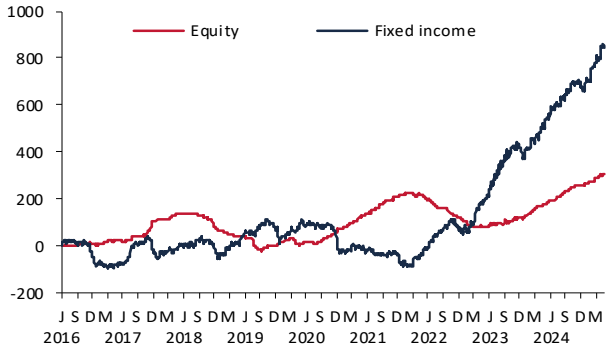
Graph 125
Investment funds' net assets
Billions of pesos



Data as of May 15, 2025.
Source: Banco de México using CNBV data.

So far in the first half of 2025, the total assets of fixed income have grown by 8.7%, driven by inflows and positive returns observed during the period (Graph 126).

Graph 126
Cumulative flows of investment funds
Billions of pesos



Data as of May 15, 2025.
Source: Banco de México with CNBV data.

As for equity funds, in the same period they recorded positive flows, although with mixed returns, so their assets under management grew, albeit at a slower pace, with an increase of 4.8% (Graph 127).

The liquidity of investment funds, estimated using the methodology developed by Banco de México,[81] has remained stable relative to the end of 2024. When considering only those funds with lower portfolio liquidity relative to their redemption limits[82] or liquidity-at-risk[83] thresholds, their liquidity is marginally higher than in the previous semester, although the assets under management for these funds remained broadly unchanged (representing 26% of the sector's total assets as of the date of this *Report*) (Graph 127). These assets are mainly held by equity funds which, as a reflection of their business model, maintain a lower share of liquid assets in their portfolios. In some cases, funds should review whether their redemption practices are consistent with the liquidity of their portfolios.

[80] "Report on contributions to the Welfare Pension Fund, delivery of resources to the Institutes for pension supplement payments, return of resources, and rejection of payments made (Period October - December 2024)."
https://www.fpbienestar.org.mx/d/Informe4T2024.pdf

[81] The following are considered liquid assets: LTROs with terms of less than 15 days, bank deposits, cetes, Federal Development Bonds, Savings Protection Bonds, Udibonos and BPAs.

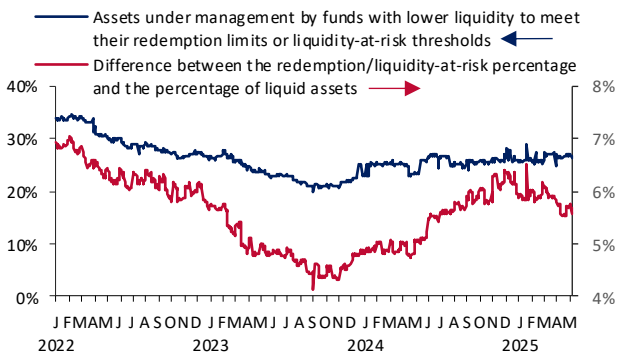
[82] Refers to the maximum percentage of total assets under management that the fund commits to redeem shares from investors on a single day.

[83] Calculated as the average of monthly outflows in the 95th percentile or higher of the flow distribution since 2008, based on historical data, expressed as a proportion of total assets at the beginning of the month.

Graph 127

Assets of investment funds with lower liquidity

Percent of total net assets



Data as of May 15, 2025.

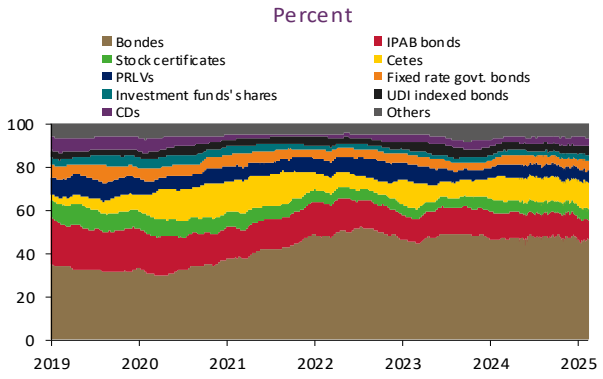
Source: Banco de México using data from CNBV.

This contrasts with the ample liquidity generally observed in fixed income funds, whose assets are primarily composed of government securities. As of May 15, 2025, Federal Development Bonds (Bondes, its acronym in Spanish) accounted for 46.4% of total assets, followed by Federal Treasury Bills (cetes, its acronym in Spanish) with 12.1%. A noteworthy development is the continued increase in the share of cetes, which rose by 114 basis points (bps) compared to the end of 2024, alongside a reduction of around 150 bps in the share of both Bondes and Banking and Deposit Insurance and Resolution Agency Bonds (IPAB) over the same period (Graph 128).

Graph 128

Top holdings in fixed income funds' portfolios

Percent



Data as of May 15, 2025.

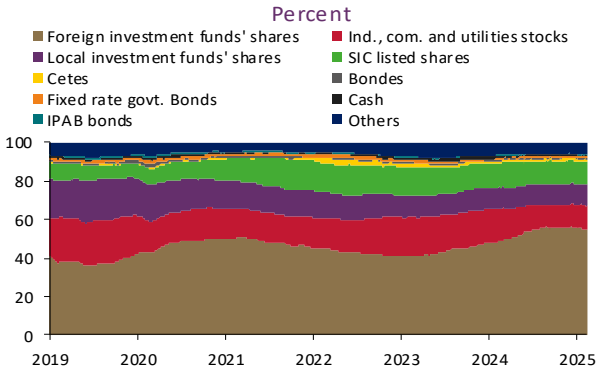
Source: Banco de México using CNBV data.

Conversely, equity funds invest primarily in other foreign investment funds (including Tracs).[84] As of May 15, 2025, shares in foreign funds accounted for 55.1% of the total assets of equity funds. Additionally, they invest in domestic industrial, commercial, and services sector stocks, which represented 12.1% of assets, and in foreign stocks, which accounted for 11.1% (Graph 129).

Graph 129

Top holdings in equity funds' portfolios

Percent



Data as of May 15, 2025.

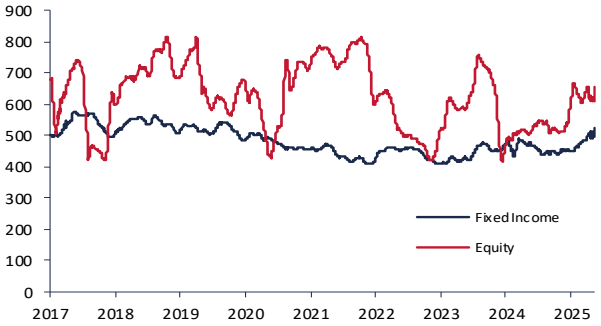
Source: Banco de México with CNBV data.

The sensitivity of the aggregate fixed income portfolio to interest rates, as measured by duration, remained stable during the first half of 2025. The average duration of the fixed income portfolio tends to remain within a range of 400 to 550 days (between 1.1 and 1.5 years). As for the duration of the equity portfolio, it tends to be more volatile (Graph 130). However, in this sector, the instruments for which this metric applies represent only a small portion of total assets, 7.3% as of May 15, 2025.

Graph 130

Duration of the aggregate portfolio of investment funds

Days (Moving average of 10 periods)



Data as of May 15, 2025.

Source: Banco de México with CNBV data.

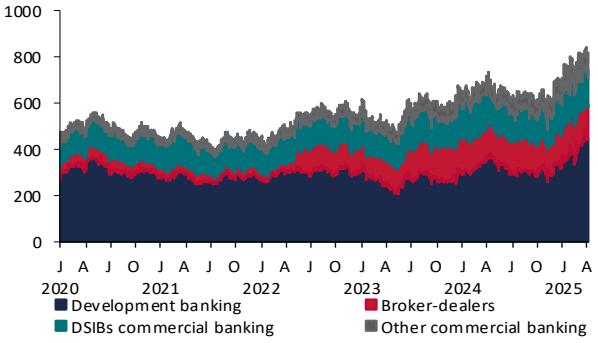
[84] Stock-referenced certificates (TRACS, its acronym in Spanish).

Investment funds provide liquidity to the financial system through the repo market. As of May 15, 2025, investment funds accounted for 22% of the total amount of repo funding granted to the financial system, representing an increase of 29% compared to the end of 2024. This increase was mainly driven by a higher volume of transactions with development banks, which accounted for the largest share of repo funding received by investment funds, at 54% (Graph 131). As for repo funding received, investment funds have not used this funding channel.

Graph 131

Amount financed by investment funds in the repo market

Billions of pesos



Data as of May 15, 2025.

Source: Banco de México.

The market risk to which fixed income investment funds are exposed, as measured by the regulatory market *VaR*[85] as a proportion of net assets, remains at levels similar levels to those observed in the previous *Report*.

IV.3.4. Broker-dealers

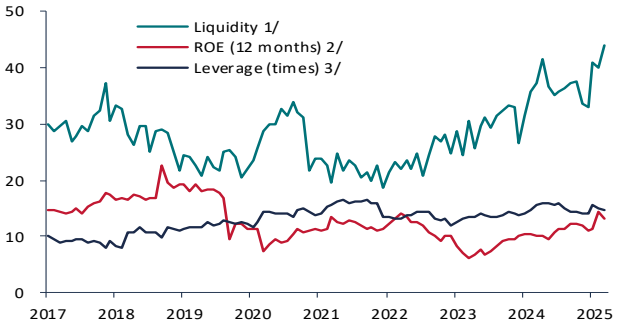
The main risks in this sector are leverage through repurchase transactions and market risk associated with its investment portfolios. Since the previous *Report*, broker-dealers' leverage has increased slightly. In addition, both the liquidity indicator and the profitability indicator increased during the same period; the latter due to an increase in net income, together with a smaller increase in average stockholders' equity. In turn, the net income increased in real terms due to lower administrative expenses and an increase in income from services (net commissions and income from financial advisory services) (Graph 132).

Regarding the sector's solvency, the CAR decreased slightly; however, it remains at high levels both for the system as a whole and for most of the individual institutions. The decline in the system-wide CAR is explained by a smaller increase in regulatory capital relative to the growth in total risk-weighted assets in the sector.

Graph 132

Leverage, Liquidity and ROE

Percent



Data as of March 2025.

Source: Banco de México and CNBV.

1/ Liquidity = Current assets / Current liabilities. Where:
Current Assets = Cash and Equivalents (Cash + Banks + Other cash and cash equivalents + Currencies receivable) + Unrestricted Tradeable Instruments + Unrestricted Readily Marketable Instruments + Repo Receivables + Accounts Receivable.
Current Liabilities = Short-term bank loans and from other bodies + Repo liabilities + Other Accounts Payable.

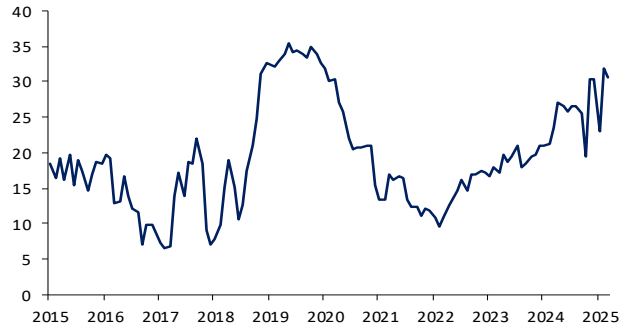
2/ ROE = Net Income 12-month flow / Total Equity 12-month average.

3/ Leverage = (Total liabilities - Settlement Receivables) / Total Equity.

The market risk to which broker-dealers are exposed, as measured by the 99.9% market *CVaR* over a one-month horizon relative to net capital, increased marginally since the previous *Report*. This change reflects adjustments in portfolio composition towards instruments with higher sensitivity to interest rate movements. The level of market *CVaR* is low relative to the broker-dealers' regulatory capital in the aggregate, indicating their capacity to absorb unexpected losses derived from the market risk of their portfolios in an extreme scenario (Graph 133).

[85] Article 131 of the General Provisions Applicable to Investment Funds and Persons Providing Services to Them establishes that the *VaR* calculated by the funds must be computed daily using the model deemed most convenient, but must contain the following: 1) a confidence level of ninety-five percent; 2) a sample period of at least one year; 3) a time horizon for which the undervaluation is estimated at one day.

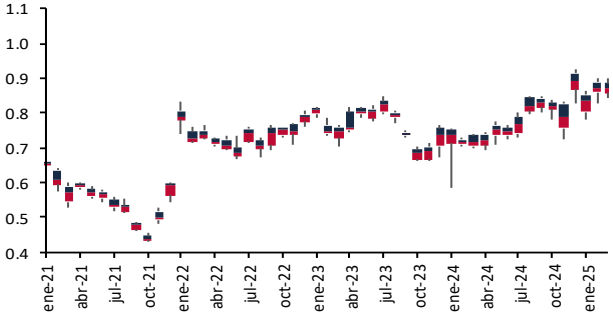
Graph 133
99.9% CVaR for brokerage firm's market risk
Net capital percent



Data as of March 2025.
Source: Banco de Mexico, CNBV, BMV, Bloomberg and Valmer.

The sensitivity of broker-dealers' debt instrument portfolios to interest rate changes, measured by duration based on market information, has been on an upward trend since the previous *Report*. The average duration increased from 0.83 years in September 2024 to 0.95 years in April 2025, driven portfolio rebalancing toward longer-term debt instruments. However, most of their investments remain concentrated in variable-rate or short-term government securities, which limits sensibility to changes in market risk factors (Graph 134).

Graph 134
Average monthly duration of brokerage firm's position
Years

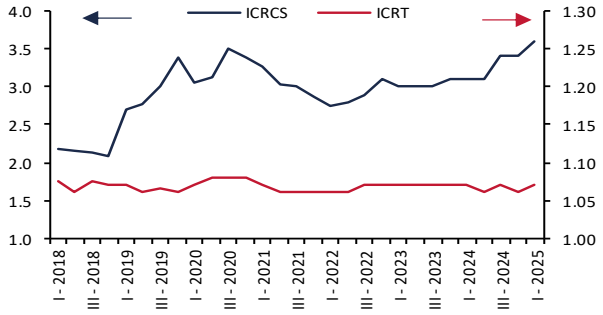


Data as of April 2025.
Source: Banco de México.

IV.3.5. Insurance companies and bonding institutions

The insurance and surety sector in Mexico continues to show high solvency ratios. Both the Technical Reserves Coverage Index[86] (ICRT) and the Capital Solvency Requirement Coverage Index[87] (ICRCS) remain above the regulatory minimum levels, and indicate that the industry has sufficient reserves and capital to face its risks without jeopardizing the stability and solvency of the sector (Graph 135).

Graph 135
Coverage ratios of the insurance sector
Number of times



Data as of March 2025.
Source: CNSF.

The sector is comprised of 102 insurance institutions[88] and 10 surety companies. The sector's assets as of the first quarter of 2025 totaled 2.84 trillion pesos (7.9% of the financial system's total assets), which registered a real annual increase of 11.9%.

Premium issuance in the sector increased by 12.4 %[89] during the first quarter of the year (Graph 136) with increases in the volume of written premiums in almost all lines of business, with the exception of surety bonds. The largest contribution to this growth was made by the life line, with real annual growth of 10.5%. Non-auto casualty segments[90] and auto also

[86] The Technical Reserves COVERAGEHEDGING INDEX (ICRT) is calculated by dividing the investments backing the technical reserves by the amount of those reserves. When this ratio is greater than or equal to one, it means that the institution maintains sufficient resources to back its obligations.

[87] The ICRCS is calculated by dividing the sum of eligible own funds supporting the solvency capital requirement by the amount of the solvency capital requirement. If the ratio is greater than one, it means that the institution maintains sufficient resources to cover unexpected losses.

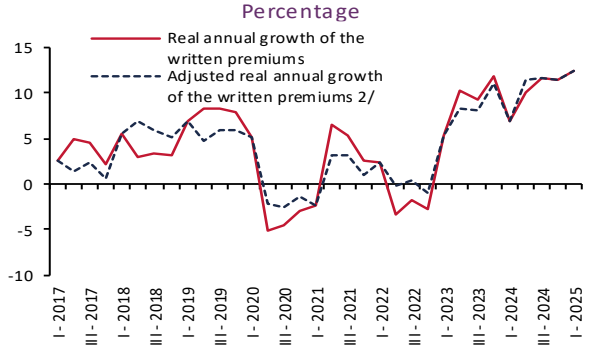
[88] This figure considers the total number of institutions authorized to operate.

[89] Growth data in this section are expressed as real growth in the cumulative amount for the year through the reference quarter, compared to the same period of the previous year.

[90] Non-automobile liability includes: civil liability and professional risks, maritime and transportation, fire, catastrophic risks, agricultural and animal risks, credit, mortgage loans, financial guarantee, miscellaneous and surety.

contributed to this growth, with increases in issuance of 27.5 % and 10.4%, respectively.

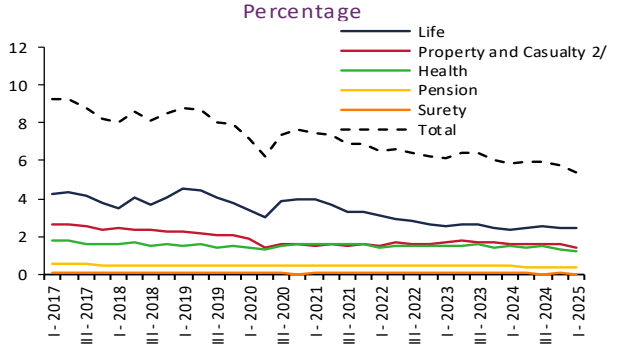
Graph 136
Real annual growth of the written premiums of the insurance and bonding sector [1/]



Data as of March 2025.
Source: CNSF.
1/ Cumulative growth compared to the same quarter of the previous year.
2/ The Pemex comprehensive policy has a biennial term. In order to understand the growth trends of the sector, the premium is evenly spread over each year. In June, the Pemex policy was issued, as in previous years, but with a one-year term instead of two. As a result, the growth in the last three quarters remains the same.

In the first quarter of 2025, the cost of claims in the sector remained at historically high levels, with a real growth of 8.4% compared to the same period of the previous year. This increase is explained by higher costs of claims in life (due to the increase in individual life claims), accident and illness (explained by the increase in the costs of hospital and health services), and property and casualty (driven by the increase in the number of claims and the cost of repairs within auto insurance) with real annual growth in the accumulated amount for the year of 14.4%, 3.6% and 4.5%, respectively. Nevertheless, the growth in technical reserves has been greater than the growth in the cost of claims (Graph 137).

Graph 137
Claims Ratio of the Insurance Sector Relative to Technical Reserves [1/]



Data as of March 2025.
Source: CNSF.
1/ Quaterly Claims relative to Technical Reserves at the end of the quarter. While claims are considered by individual insurance lines, reserves are accounted for the total across all lines.
2/ Property and Casualty includes auto insurance.

Profit in the first quarter of 2025 increased in real terms by 20.8% with respect to the same quarter of 2024, which is explained by the good performance in the investment of the sector's reserves and by the growth in the issuance of premiums referred to above.

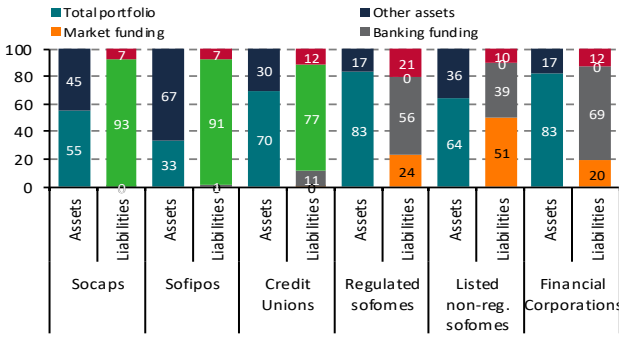
IV.3.6. Other Non-Bank Financial Intermediaries

The other non-bank financial intermediaries (ONBFI) sector, in terms of their total assets, is small compared to the rest of the financial intermediaries; however, its participation in household and corporate financing has remained stable over time. In the consumer credit segment, the participation of ONBFIs account for nearly one third of total credit; notably, non-regulated institutions' share in this type of credit has declined in recent years. In the case of corporate credit, the ONBFIs' share is around one-fifth of the total, and in recent years the share of the non-regulated sector has increased.

The participation of ONBFIs in the financial system has become more relevant, as they provide financial services to a population with little or no access to banking, or have simply innovated by offering digital services, which facilitates the attraction of new clients. The sector's funding is heterogeneous; some institutions rely mainly on unstable funding sources (bank loans and market-based liabilities), while others depend more heavily on traditional deposit-

taking. The former continues to face challenges, although their access to funding has improved since mid-2024 (Graph 138).

Graph 138
Assets and Liabilities of Other Non-Bank Financial Intermediaries (ONBFI)
Percent



Data as of March 2025.
Source: Banco de México, BMV, CNBV and Condusef.

With data as of March 2025, total financing granted by domestic ONBFIs to the non-financial private sector increased at a lower annual rate in real terms than that observed in the previous quarter (September 2024). This was mainly due to the slower growth of the portfolio granted by regulated entities. The NPL ratio of the credit portfolio granted by ONBFIs registered a slight decrease, although it remains at historically high levels, particularly for non-regulated entities.

Regarding the sources of financing for regulated ONBFIs, growth in traditional deposit-taking and members' savings continued, and although the rate of growth stabilized, financing obtained through loans from commercial banks declined. Meanwhile, debt issuance increased compared to the previous *Report,* which had recorded a contraction, and funding from development banks grew in the final months of 2024, after several months of contraction. For non-regulated ONBFIs, funding from both commercial and development banks increased, and debt issuance grew at a slightly lower rate than that observed during the same period of the previous year.[91] The ONBFI sector as a whole managed to increase the financing it provides to the non-financial private sector, albeit at a slightly lower rate than that of commercial banks. Finally, it is worth noting the return of one ONBFI to the international debt market with a new issuance in early 2025.

Some entities in the ONBFI sector have risk indicators at levels that suggest financial vulnerabilities. The number of these entities increased slightly compared to the previous *Report*; however, their share of assets decreased. Nevertheless, the exposure of domestic banks to these vulnerable entities is low relative to their regulatory capital. Aggregate exposures of both commercial and development banks—through direct lending to ONBFIs and their own holdings of securities issued by the latter—remained relatively low. Consequently, a default by some entities in this sector would not pose a risk to the banking system. Finally, capitalization levels of regulated ONBFIs remain stable and high relative to regulatory minimums (Graph 139).

[91] It should be recalled that the group of ONBFIs analyzed here includes financial companies that are not part of the supervised and regulated financial system, and that these companies may issue debt. In addition, Article 87-B, Chapter II, of the General Law of Credit Organizations and Auxiliary Activities establishes that: regulated multiple-purpose financial companies are considered to be those that issue debt securities under their responsibility, registered in the National Securities Registry in accordance with the Securities Market Law, or, in the case of trust securities also registered in said Registry, when the fulfillment of obligations related to the securities issued under the trust depends totally or partially on said company, acting as trustor, transferor, or administrator of the trust assets, or as guarantor or surety of the aforementioned securities. Non-regulated multiple purpose financial companies are those that do not fall under the above scenarios. In the case of some non-regulated sofomes, there are certain issues whose fulfillment of obligations do not depend on the company, without contravening the provisions.

Table 5

Regulation and Risks Related to Other Non-Banking Financial Intermediaries[1/]

Entity / Instruments / Activity		Risk of:			Those that participate in credit intermediation other than banking	Total assets			Regulation by:			Supervisor / Regulator
		Maturity Trans-formation	Leverage	Runs		Thousands of million Mexican Pesos	% of GDP	Real annual change in per cent	Capitalization	Liquidity	Leverage	
Socaps (levels 1 to 4)		✓	✓		✓	296	0.9	9.5	✓	✓		CNBV
Sofipos (levels 1 to 4) [2/]		✓	✓	✓	✓	199	0.6	60.9	✓	✓		CNBV
Credit unions (levels 1 to 3)		✓	✓		✓	71	0.2	2.9	✓	✓		CNBV
Regulated Sofomes	With links with a bank and consolidated with said bank	✓	✓			365	1.1	-6.3	✓	✓		CNBV
	With links with a bank but not consolidated	✓	✓			66	0.2	2.4	✓	✓		CNBV
	No links with a bank and issues debt [3/]	✓	✓	✓	✓	215	0.6	1.8				CNBV
Non-regulated Sofomes [4/]		✓	✓		✓	658	1.9	9.0				
Financial corporations [5/]		✓	✓		✓	381	1.1	-4.3				
Non Bank credit card issuers [6/]		✓	✓		✓	107	0.3	19.1				
Securitizations of financial entities [7/ 8/]		✓	✓		✓	502	1.5	-2.8				CNBV
Securitizations of non-financial entities [7/ 9/]		✓	✓			245	0.7	-6.6				CNBV
Total non-banking financial intermediaries						**2,740**	**8.0**	**5.1**				
Real Estate Investment Trust (fibras) [7/]			✓			552	1.6	-4.0			✓	CNBV
Mortgage trusts (no fibras) [7/]		✓	✓		✓	5	0.02	-15.5			✓	CNBV
Development Capital Certificates (CCD) [7/]			✓			593	1.7	23.1			✓	CNBV
Energy and infrastructure trusts (fibra E) [7/]			✓			140	0.4	-1.9			✓	CNBV
Investment projects trusts (CERPIS) [7/]			✓			102	0.3	46.0			✓	CNBV
Total infrastructure financing vehicles						**1,393**	**4.0**	**9.1**				
Total of financial intermediaries, infrastructure financing vehicles and activities						**4,133**	**12.0**	**6.4**				
Other financial intermediaries or activities [10/]					✓	6,483	18.8	16.5				CNBV/CNSF
Capital investment funds [11/]						0	0.0	n.a.				
Pensions funds [12/]						8,020	23.3	12.1				Consar
Commercial banks		✓	✓	✓		15,267	44.4	6.5	✓	✓	✓	CNBV/Banxico
Memo:												
Crowdfunding Institutions [13/]						1	0.0	5.7				CNBV
Electronic Payment Fund Institutions [13/]						47	0.1	11.1				CNBV

Data as of March 2025.

Source: Banco de México, CNBV, CNSF, Condusef, Indeval and BMV.

1/ The red marks indicate cases in which the risk described may materialize or does materialize currently in some of the entities within the specific sector in Mexico. The risks in the columns are defined as: (i) maturity transformation risk: the risk from obtaining short-term funding to invest in long-term assets; and (ii) the leverage risk: the risk coming from borrowing funds to buy assets to increase potential investment profits (losses).

2/ Total assets in the SOFIPO sector registered a notable annual increase, mainly explained by the growth in assets of new competitors with digital models following the acquisition of existing SOFIPO licenses.

3/ In 2014, various legal provisions were amended to include sofomes issuing debt securities within the regulatory framework. Starting in 2015, 18 unregulated entities changed their status to regulated due to their issuance of debt and gradually began reporting information to the CNBV.

4/ Figures for the number of non-regulated SOFOMs are sourced from the Commission Registry (RECO) – Condusef. New data is presented with preliminary figures resulting from corrections to information reported by non-regulated SOFOMs since June 2023. Only SOFOMs with a positive loan portfolio are considered. Credit portfolios of non-regulated SOFOMs that grant loans exclusively to related entities or subsidiaries are excluded, as they are not considered true credit intermediaries. As of December 2024 (latest available date), the Bureau of Financial Entities has information on 2,158 operational non-regulated SOFOMs (SOFOM E.N.R.), including those lending exclusively to related entities or subsidiaries. Asset figures refer to the total loan portfolio granted by these entities as reported to Condusef.

5/ These are companies that incur debt but are not financial entities under Mexican law. For example, financial arms of automotive manufacturers and companies that conduct credit or commercial leasing activities. The figures presented here only include those that issue debt in financial markets. It should be noted that two entities changed their status, moving from regulated and unregulated sofomes, respectively, to both becoming financial companies, affecting the growth of this category due to this reclassification.

6/ Includes only the balance of credit granted directly by department stores to their customers without any financial entity intermediary.

7/ Represents the outstanding value at market prices.

8/ Includes securitizations by banks, SOFOMs, Infonavit, and Fovissste.

9/ Includes securitizations from the private and public sectors, such as those of states and non-financial companies.

10/ Includes fixed-income mutual funds, local debt exchange-traded funds (ETFs), warehousing companies, brokerage firms, credit insurers, fondo mexicano del petróleo and fondo de pensiones para el bienestar.

11/ Includes investment funds invested in equity instruments, local exchange-traded funds tracking stock indices.

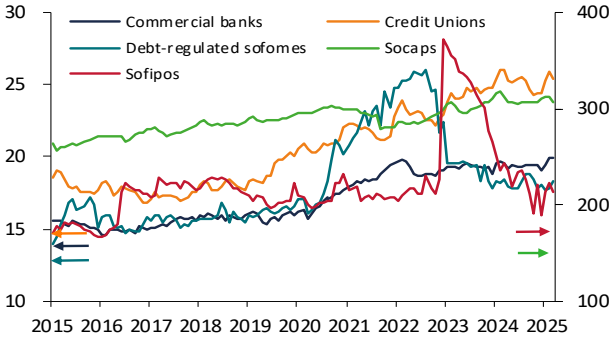
12/ Includes Siefores (retirement savings funds).

13/ As of May 2025, there are four authorized crowdfunding institutions and fifteen electronic payment fund institutions that are not yet operational. Asset figures refer only to 49 IFPEs that published their financial statements on their websites as of March 31, 2025. These institutions do not engage in credit intermediation on their balance sheets; in the case of crowdfunding institutions, the financing channeled by the platform from investors to projects is recorded in memorandum accounts.

Graph 139

Capitalization Level of Regulated NBFIs [1/, 2/]

Percent



Data as of March 2025.

Source: CNBV.

1/ Right axis: Capitalization Level = Net capital / Total capital requirement for risks. Socaps and Sofipos must maintain a net capital equal to or greater than the total regulatory capital requirement for risks; i.e., equal to or greater than 100%.

2/ Left axis: Capitalization Index = Net capital / Risk-weighted assets. Commercial Banks, regulated Sofomes equity-linked to Commercial banking institutions or financial groups and and Credit Unions must maintain a minimum ICAP of above 8%.

As of December 2024, total assets of the sofipo sector recorded an annual increase of nearly one hundred percent, and although growth slowed by March 2025, the sector continues to expand. This is mainly due to the asset growth of new competitors with digital models. These new competitors face important challenges going forward:[92] on the one hand, accessing a stable source of funding, including traditional deposit-taking; and on the other, keeping the level of credit risk in their portfolios under control, as their models incorporate individuals new to the financial system (without a prior credit history). These new entities can increase financial inclusion, but also increase the leverage of new borrowers, which makes them vulnerable to the economic cycle.

Although sofipos and socaps are subject to prudential regulation and supervision, this differs from that applied to banks and depends on the segment of the population they serve. Therefore, the operations they are allowed to perform vary according to their size and the level of operation authorized by the CNBV. Due to their origin, these popular-sector entities aim to promote savings and support segments of the population without access to the banking sector, and such savings are protected by deposit insurance for up to 25 thousand UDIS. It is important to recall that the rest of the ONBFIs are legally prohibited from taking deposits from the public.[93] Some sofipos have already applied for a banking license and are currently in the authorization process.[94] Obtaining such a license would allow them to expand the services they offer to the public, which would promote financial inclusion and competition. Moreover, this would reduce the potential for regulatory arbitrage, since banking regulation is more robust in several areas compared to that currently applicable to the popular credit sector.

Regarding the sources of funding for ONBFIs, sustained growth continues for non-regulated ONBFIs. In the case of regulated ONBFIs, although funding sources continue to grow, the pace of growth has slowed since December 2024, mainly due to a decrease in financing from commercial banks (Graph 140).

[92] As of December 2022, NU Financiera México, a Fintech entity specializing in credit through a digital card, became a sofipo after acquiring an entity that was no longer operating. Fintech Klar also acquired the sofipo Servicios Financieros Alternativos (Sefia) in April 2023 and Fondeadora acquired the sofipo Apoyo Múltiple in September 2023. Finally, the financial company Stori merged with Savvi Financieros to become a sofipo in July 2024. As of March 2025, no new sofipo licenses have been authorized. The market shares of these sofipos, which acquired previously granted licenses within the sector, are 56.7%, 7.17%, and 0.8%, respectively.

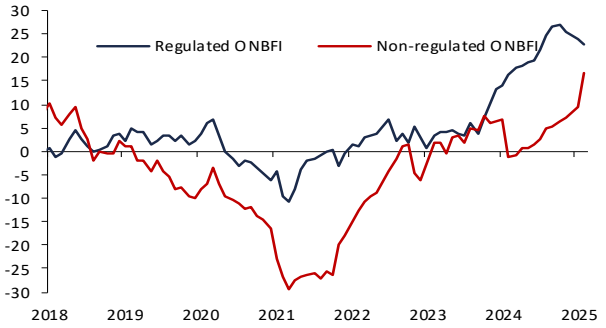
[93] Sofipos rely heavily on traditional deposit-taking to fund their lending activities. In order to guarantee their deposits, a sofipo must be affiliated with the Protection Fund, which is a trust established by the Federal Government with the development banks acting as trustee institution, without such trust being considered part of the federal public administration or a public trust (Articles 98 and 99 of the Savings and Popular Credit Law). Deposit insurance is managed by Prosofipo through the trust, and the savings of the sofipo depositors are protected for up to 25 thousand UDIs in the event that a sofipo is liquidated or ceases to operate (Article 105 of the Savings and Popular Credit Law). The assets of the Protection Fund are composed of the following resources: contributions made by the Federal Government; ordinary monthly fees payable by the sofipos; extraordinary fees charged to the sofipos; and any other assets, rights and obligations acquired by the Fund (Article 101 of the Savings and Popular Credit Law).

[94] In April 2025, the CNBV authorized Nu Sofipo to become a credit institution; however, the transformation has not yet taken place, and the process is still ongoing.

Graph 140

Real annual growth of financing sources [1/]

Percent



Data as of March 2025.
Source: CNBV, BMV and Condusef.

1/ONBFI funding sources include loans granted by banks, debt issued locally and overseas, as well as traditional deposit taking from clients or partners for some regulated ONBFI.

Due to the segment of the population and companies they serve, ONBFIs are generally vulnerable to a downturn in economic activity. Therefore, an abrupt slowdown could lead to a significant increase in NPL ratios and cause problems in their credit quality and net interest income generation. Although these institutions do not pose a risk to financial stability—given their small size and limited interconnectedness with domestic banks and other financial intermediaries—they could contribute to the over-indebtedness of households and SMEs exposed to economic shocks.

It is noteworthy that the prudential regulation applicable to regulated ONBFIs under CNBV supervision, in addition to the prudential regulation that ensures their sound performance, solvency and the protection of their financial services clients, also includes obligations related to the prevention of money laundering and the financing of terrorism, aligned with the regulations applicable to credit institutions.[95]

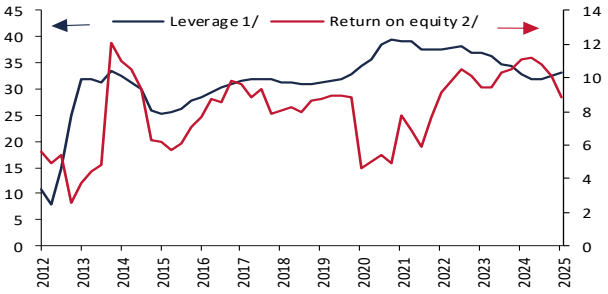
Other financing vehicles

The income generated by Real Estate Investment Trusts (REITs), as a whole, increased slightly compared to the previous *Report* and also year over year. The occupancy rate of REITs also rose slightly relative to the previous year, particularly due to the recovery in hotel REITs, and to a lesser extent, in commercial REITs; while it remained stable compared to the previous *Report*. On the other hand, investment spending by the REITs increased relative to the previous year, and compared to the previous *Report*, only industrial REITs reduced their investment spending. The overall leverage level of REITs increased slightly relative to the previous *Report*. Although the sector's leverage level is around 30%, some REITs maintain levels close to 50% (Graph 141).

Graph 141

Leverage and return on equity of Mexican REITs

Percent



Data as of March 2025.
Source: BMV and BIVA.

1/ Leverage is calculated by dividing debts by assets.

2/ Return on equity (ROE) is calculated by dividing Net Income by Equity. Net Income is the sum of the last 4 quartes. Assets, debt and equity are the average of the last 4 quartes.

The outstanding balance of equity investment issuances of the Trusts on Energy and Infrastructure Projects (Fibras E, its acronym in Spanish) remained at similar levels to those reported in the previous *Report*, while their leverage and liquidity risk indicators declined. The overall profitability of all of

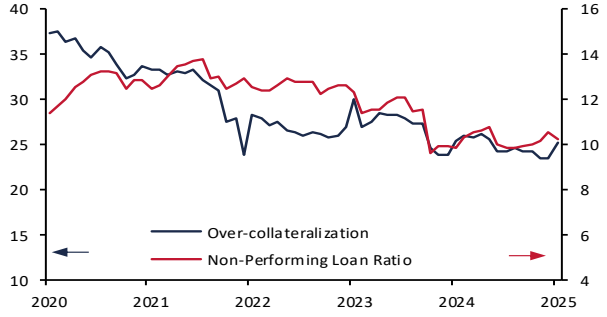
[95] The main obligations regarding the prevention of money laundering and terrorist financing include: reporting of unusual, relevant and concerning transactions; maintaining a list of blocked persons; customer identification and knowledge of the ultimate beneficiary; staff training in anti-money laundering prevention; safeguarding of costumer and transaction information; appointment of a compliance officer; a compliance manual; and automated systems along with a specialized compliance structure. These obligations apply to credit institutions, regulated sofomes, non-regulated sofomes, socaps, sofipos, credit unions, broker dealers and financial technology institutions. On the other hand, the requirement of an external audit with a prevention of money laundering and terrorist financing focus applies only to credit institutions, socaps, sofipos and credit unions. The above is based on the Law of Credit Institutions (LIC, for its Spanish acronym), the General Law of Credit Organizations and Auxiliary Activities (LGOAAC, for its Spanish acronym), the Law of Credit Unions (LUC, for its Spanish acronym), the Law for the Regulation of the Activities of Savings and Loan Cooperative Societies (LRASCAP, for its Spanish acronym) , and the Federal Law for the Prevention and Identification of Operations with Illegal Proceeds (LFPIORPI, for its Spanish acronym), under the supervision of the CNBV and SHCP.

these vehicles increased. Currently, all of these financing vehicles are generating profits, regardless of when they were created, which is explained by the fact that these types of vehicles start with mature and stabilized projects.

The outstanding balance of Certificates of Capital Development (CCDs) and Investment Project Fiduciary Securitization Certificates (Cerpis, its acronym in Spanish) increased, reaching an all-time high. Profitability improved for both vehicles, while their liquidity declined. By nature, these vehicles generally begin with non-mature or non-stabilized projects, which require time to reach a break-even point in terms of income and costs. It is worth recalling that siefores are the main holders of these instruments; however, siefores' exposures to CCDs and Cerpis with negative returns represent at most 2 % of the value of their portfolios.

The outstanding balance of bulk or homogeneous loan securitizations (such as Infonavit and Fovissste mortgage portfolios) increased slightly. Overcollateralization and NPL ratios increased slightly compared to the previous *Report*; however, they remain at historically low levels. One-fifth of these issuances, mainly by ONBFI, show weak metrics of solvency, profitability and NPL. The exposure of banks and other institutional investors, such as siefores, to these structures is nil (Graph 142).

Graph 142
Over-collateralization and Non-Performing Loan Ratio in Homogeneous Securitizations[1/]
Per cent



Data as of March 2025.
Source: BMV y BIVA.
1/ Over-collateralization is calculated as 1 minus the ratio of the outstanding balance of the issuance to the sum of current assets and cash, multiplied by 100.

The size of non-homogeneous securitizations (such as road tolls future revenues) increased slightly. Leverage and liquidity levels of these structures remained stable, while profitability rose to an all-time high. Fewer than one-tenth of these issues exhibit weak solvency, profitability and liquidity metrics. Banks' exposure to these structures, as well as that of other institutional investors, such as siefores, remains very low.

Sector of institutions that make use of financial technology

As of May 2025, a total of 85 Financial Technology Institutions (ITF, its acronym in Spanish) have been authorized under the Law to Regulate Financial Technology Institutions (LRITF, its acronym in Spanish). Of these, 27 are Crowdfunding Institutions (IFC, its acronym in Spanish) and 58 are Electronic Payment Funds Institutions (IFPE, its acronym in Spanish). ITF provide innovative financial services and can help complement the existing offering to foster inclusion, efficiency, and competition among participants.

The ITF sector remains small, with capital equivalent to 4.6% of that held by commercial banks. However, due to its steady growth, its size is now comparable to that of other groups of financial intermediaries. The capital stock of the ITF is equivalent to 46.4% of the contributed capital of sofipos and 146.3% of that of socaps.

According to information published by the institutions on their websites, at the end of the first quarter of 2025, funding granted through debt IFC continued to grow. However, the level of past due loans remains high for some entities, with cases exceeding 30%, although the weighted average (by funding) among all debt IFC which report data was 8.4%.[96]

Regarding IFPE, they are still small compared to other intermediaries. For example, electronic payment funds (FPEE, its acronym in Spanish) issued by IFPEs account for only 0.4% of bank deposits, despite continuous growth. FPEE amounted to 28,673 million pesos in March 2025, up from 23,708 million in June 2024. It is noteworthy that 82% of the total assets of

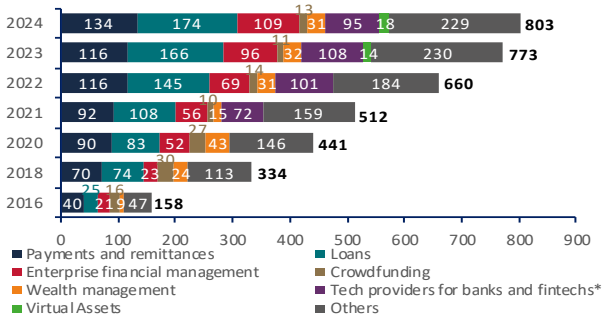
[96] Calculation based on information available as of May 2025, published by the IFC on their websites.

the IFPEs that publish their financial statements correspond to large IFPEs (those with FPEE greater than $1 billion pesos).

On the other hand, according to a report by Finnovista,[97] the number of identified Fintech companies in a broad sense[98] increased from 773 in 2023 to 803 in 2024 (Graph 143). Although the annual growth rate slowed to only 3.9% in 2024, compared to 18.9% during 2023, there was an increase in their reported revenue growth, which could signal industry consolidation. In fact, the sector's annual revenue growth was 31% during 2023-2024, compared to 22% during 2021-2024.

The largest number of Fintechs identified by Finnovista corresponds to the lending segment, followed by payments and remittances, and corporate finance management. The payments and remittances sector is the most dynamic, driven by electronic wallets, payment solutions, and remittance projects, while the lending sector supports financial inclusion by offering products to consumers with no credit history. Meanwhile, other segments, such as technological infrastructure for banks and Fintechs, insurance, and open finance, experienced a slight decrease in the number of companies.

Graph 143
Number of Fintech Startups
2016-2024[1/, 2/]



Data as of December 2024.

Source: "Fintech Radar México 2025", "Radar México-VIII Edición", "Radar México 2023", "Radar Fintech e Incumbentes". Finnovista, Alianza del Pacífico y BID. 2021 and "Radar México 2020", Finnovista. 2020.

1/ The rings correspond to the years 2016, 2018, 2020, 2021, 2022 and 2023, seen from the center of the graph outwards, respectively.

2/ Business segments included in "Others are financial well-being, real estate services, insurance, digital banking, and open finance.

Regarding the development of the market of virtual assets (VA), it is important to continue monitoring it in order to identify timely any risks that may arise for the financial system. Nonetheless, interest in this type of assets in the country continues to be low. According to the 2024 National Financial Inclusion Survey, carried out by INEGI, only 2.1% of the population has purchased or invested in VAs. It is worth noting that there is a difference in behavior by gender, with 3.4% of men having purchased or invested in VA, compared to only 1.0% of women.[99] This low interest in the country is also reflected in Google search trends for major VAs, as compared to other relevant financial terms (Graph 144).

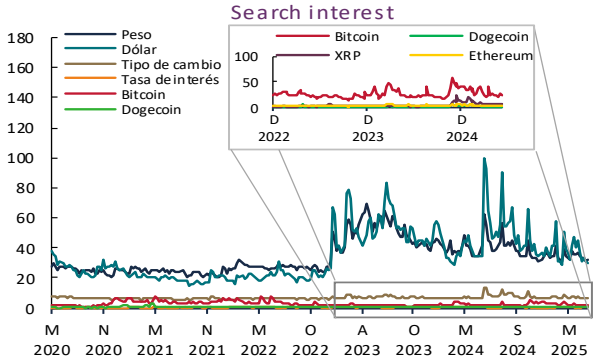
[97] Finnovista (2025). "Fintech Radar Mexico." February 25, 2025.

[98] This refers to entities that provide technology-based financial services, although they have not necessarily requested authorization to operate as an ITF and may operate under other legal forms. For example, companies with online securities trading applications and platforms, companies that offer payroll advances and factoring, technology infrastructure firms that develop applications or provide cloud services, payment and remittances companies, among others.

[99] In contrast, the distribution of savings account ownership by gender is more balanced: 55% of women and 54.4% of men reported having one. For other instruments, there is a gender gap can be observed: 3.5% of women and 7.7% of men saved in a mutual fund in the past year; 3.9% of women and 6.1% of men saved in time deposits; and 2.5% of women and 4.7% of men saved in checking accounts.

Graph 144

Google searches for main virtual assets in Mexico [1/]



Data as of May 2025.

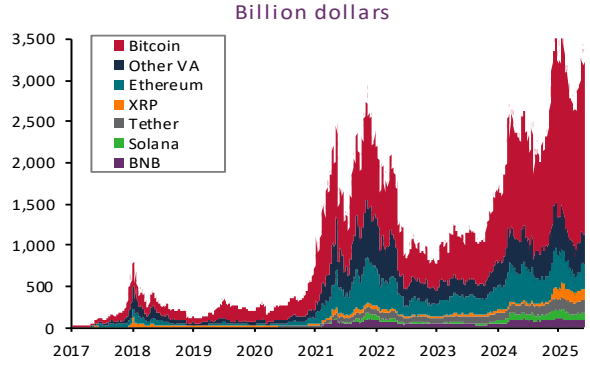
Source: Google Trends.

1/ "Google Trends" normalizes search interest to facilitate comparisons between terms. Search results are also normalized relative to the time and region of the query. Some virtual assets were omitted from the graph as their search interest was close to zero (< 6).

VA global market capitalization has shown heterogeneous behavior so far in 2025. During the first quarter of the year, it recorded a significant decline, which seems to be related to the uncertainty stemming from trade tensions, the reduction in global economic growth forecasts, and the moderation in monetary policy easing by major central banks (Graph 145). However, since April, capitalization has increased again and is now at historically high levels.

Graph 145

Total market capitalization of virtual assets [1/]



Data as of May 2024.

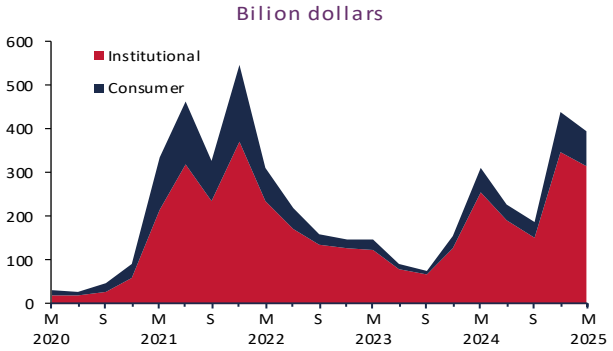
Sources: CoinGecko, Coin Dance.

1/ The "Other VA" category represents the market capitalization of the remaining VA, according to the total estimated by Coin Dance.

Since the third quarter of 2024, there has been a global increase in the participation of institutional investors in the VA market, according to data from the Coinbase platform at the close of the first quarter of 2025 (Graph 146). This trend appears to be driven by the expectation that the VA sector may face a less restrictive regulatory environment, or even be actively supported in some jurisdictions.

Graph 146

Trading volume by type of investor on Coinbase [1/]



Data as of March 2025.

Source: Coinbase.

1/ According to Coinbase's quarterly reports, its institutional investors include private and public companies, hedge funds, pension funds, insurers, etc.

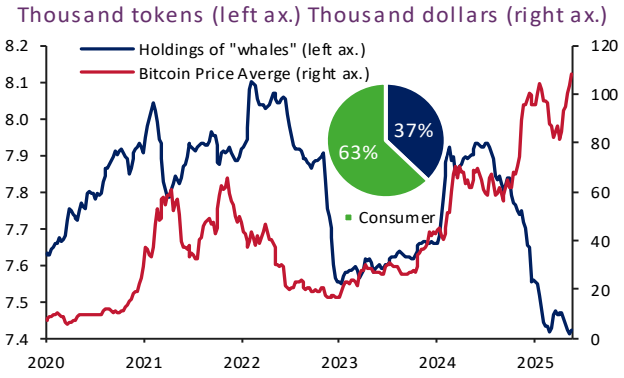
Although this greater institutional participation could be interpreted as an indication of growing interest or acceptance in certain segments of the VA market, it is important to consider that the price behavior of these assets is not based on economic fundamentals and, due to their highly speculative nature, their prices can experience sharp corrections in response to changes in expectations regarding the business cycle or policy direction towards this type of instruments. Therefore, it is important to highlight the risks associated with the financial system's participation in, or exposure to, VAs, which, in addition to their speculative nature, have other limitations such as high volatility, high transaction costs, scalability challenges, and quasi-anonymity.

In this context, sustained growth in the VA market, combined with increased participation of institutional investors, could pose risks to financial stability. These include indirect exposures of the traditional financial system to highly volatile assets, operational and cybersecurity risks, disruptions to payment systems, and potential distortions in capital flows.

Another noteworthy risk is the high concentration of assets in the sector. The concentration of VA in the

hands of large holders, commonly referred to as "whales", poses significant risks of market manipulation. It has been observed that these investors, which hold at least 1,000 tokens each, represent only 1% of all addresses, but collectively own 37 % of the total holdings. During the period under analysis, their decisions continued to significantly influence market movements. In particular, a recurring pattern was observed: reductions in their holdings tend to precede price declines, while recent price increases have been preceded by bitcoin accumulation by these holders (Graph 147). These movements underscore the potential impact that asset concentration can have on market dynamics, in addition to the risks posed by the participation of large investors in highly asymmetric markets.

Graph 147
Bitcoin holdingsof "whales" and proportion of total holdings [1/]



Data as of May 26, 2025.
Source: Chainalysis Market Intel, CoinGecko.
1/ The figures in the pie chart represent the ratio of each group's holdings relative to the total holdings in the last observation of the series.

Likewise, the VA market continues to show a high sensitivity to the actions of external actors. Recently, public statements or explicit support from high-profile political figures triggered abrupt increases in the price of certain VAs, followed by sharp declines, resulting in significant losses for investors. These episodes demonstrate how even indirect support from influential figures can trigger speculative movements, exacerbating market volatility.

In addition to the risks already described, the evolution of the VA market continues to present significant challenges from an environmental sustainability perspective. The environmental impacts derived from energy-intensive validation mechanisms reinforce the need to assess the social costs associated with the expansion of these assets.

Thus, it is essential to continue monitoring developments in the VA ecosystem and to promote measures that reduce negative externalities, strengthen transparency, and adequately protect users. Banco de México will continue to promote a safe distance between VA and the traditional financial system, and will monitor the developments in this market in order to identify, in a timely manner, any potential implications for the financial stability and, if necessary, promote measures to safeguard it.

IV.3.7. Environmental risks and sustainability of investments

The identification and analysis of environmental risks, —particularly those related to climate change and the transition to a low-emission economy—are increasingly relevant for the financial system. Proper risk management can help strengthen the system's resilience. Likewise, the development of sustainable financial instruments, such as labeled bonds, has become more relevant as a mechanism for channeling resources towards sustainable activities. In this context, Banco de México presents the analyses in this section of the Report with the purpose of fostering greater integration of these risks in the decision-making processes of financial system participants.

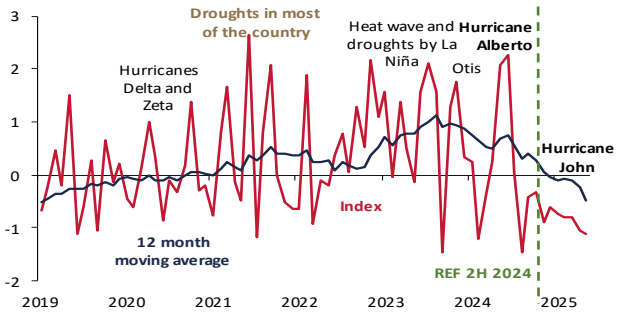
Public interest indices for issues related to environmental risks and natural disasters

Since the last *Report*, the average of the extreme events and natural disasters index from December 2024 to May 2025 has decreased compared to the previous six-month period.[100] The topics that aroused

[100] See the Financial Stability Report- June 2022, which details how the construction of the indices is based on the work of Zhang, L. (2021) who conducted a similar analysis for Hong Kong. First, search terms are selected for both the environmental risks and natural disasters index and the transition risks index. Then, seasonal adjustments are applied to each index, so that they reflect the interest of Mexican society beyond what would be expected due to seasonal factors. The indices are constructed from public web searches for terms related to each type of event.

the most public interest during this time were reflected in increased internet searches for the terms "extreme temperature", "wildfire" and "flood" because: (i) in December, intense cold fronts were recorded in the northern part of the country and extreme heat, with maximum temperatures, affected the southern part; (ii) in January, severe droughts and low rainfall contributed to an increase in wildfires, reaching their highest level since 2019; and (iii) in February, heavy rains associated with various cold fronts caused flooding in several regions of the country (Graph 148).

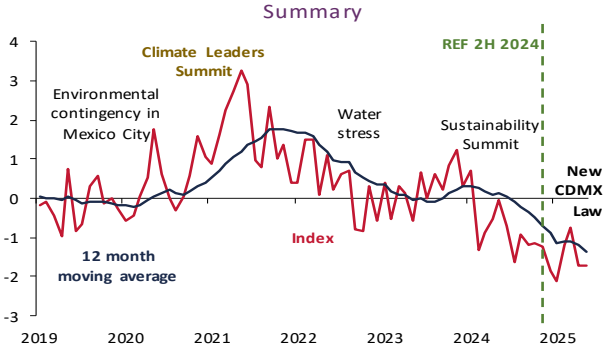
Graph 148
Interest index on isssues related to extreme hydro-meteorological events and natural disasters
Summary



Data as of May 2025.
Source: Banco de Mexico and Google Trends.

Similarly, the index of events related to transition risks also registered, between December 2024 and May 2025, a lower average than in the previous six months. During this period, the most searched terms were "carbon tax" and "energy efficiency", due to the following: i) between January and February, various states implemented new carbon taxes on industrial emissions, generating significant interest in their fiscal and environmental implications; and ii) in March, World Energy Efficiency Day was celebrated, focusing on discussion about new regulations on electric storage and vehicle efficiency (Graph 149).

Graph 149
Interest index on issues related to transition risks
Summary



Data as of May 2025.
Source: Banco de Mexico and Google Trends.

It is important to note that an increase in the indices reflects greater interest among Mexicans in transition risks and environmental risks and natural disasters. This interest may be motivated by both positive and negative, or even neutral environmental events. Therefore, changes in these indicators should not be automatically interpreted as a sign of increased environmental risks or higher transitions costs toward a more sustainable economy.

Box 7: Carbon Markets

I. Introduction

In economic terms, greenhouse gas (GHG) emissions represent a negative externality as they generate costs for society that are not reflected in market prices. These emissions, produced mainly by human activities, have unequivocally been a causal factor for global warming (IPCC, 2023), which contributes to climate change and its adverse impacts on human welfare, ecosystems and economic activity. One way to correct the failure is to internalize the social costs of emissions in the production costs or consumption decisions of those who generate them, through carbon pricing (ECLAC, 2024).

Carbon trading is a market mechanism designed to address climate change and facilitate the transition to a low-emissions economy by allowing companies or countries with high costs to reduce their GHG emissions to pay others who can achieve equivalent reductions to their emissions more efficiently (MSCI, 2024).

This mechanism has implications for financial stability, both because of its potential to mitigate systemic climate risks by mobilizing capital towards sustainable technologies, and because of the risks that may result from inadequate design or poor implementation in the financial system. In particular, carbon markets have an important role to play in managing transition risks. These risks - such as those associated with climate policies, technological advances or changes in market preferences - can affect financial stability by generating abrupt adjustments in the prices of financial assets in carbon-intensive sectors. Well-designed carbon markets can reduce these risks and encourage a more gradual and orderly transition to a low-carbon economy.

This box describes the different types and main carbon trading instruments and analyzes their behavior, trends and the main challenges they face.

II. Carbon pricing markets and instruments

Compliance markets[1]

These markets are established by governments, which determine which sectors and companies must participate, as well as the rules for their operation. They operate on the principle that GHG emitters must limit and pay for their emissions.

There are two main instruments for carbon pricing:

- **Emissions Trading Systems (*ETS*):** Under this scheme, the authorities set limits on the amounts of GHG emissions of the entities it regulates. To do so, they assign "emission allowances" to each entity for a given period.[2] Emission limits usually decrease over time. In general, each allowance corresponds to one ton of carbon dioxide equivalent[3] (CO_2e). The price of carbon in these systems is determined by the supply and demand for emission permits (World Bank, 2024).
- **Carbon taxes:** In this case, the government establishes a fee for each ton of GHG emitted. This mechanism seeks to discourage emissions by making them more costly. Unlike *ETSs*, where the price fluctuates and the amount of emissions is determined, in carbon taxes the price is fixed, and emission reductions will depend on how emitters respond to that price.

It should be noted that some governments allow companies subject to a carbon tax to offset part or all of their tax liability with carbon credits, an instrument explained as part of voluntary markets.

Voluntary markets

These markets arise outside of regulatory schemes and allow companies, governments and other organizations to offset their GHG emissions and achieve their own voluntary climate goals, such as carbon neutrality.

The main instrument in these markets is the carbon credit,[4] which is a verified and tradable certificate

[1] They are also known as compliance or mandatory markets.

[2] While the design and regulation of an ETS can vary considerably among jurisdictions, these systems can be broadly classified into two types: *cap-and-trade* and baseline.

[3] Carbon dioxide equivalent ($CO_{(2)e}$) is a measure for comparing different greenhouse gases according to their impact on global warming. It does this by converting the emissions of each gas to the amount of carbon dioxide that would have the same effect on the climate.

[4] Also called *"carbon offsets"*.

representing one ton of CO_2e avoided or removed from the atmosphere. Each credit is linked to a specific project -for example, reforestation, renewable energy or methane capture- that follows standards and methodologies designed to ensure the environmental integrity of the outcome.

Demand for these credits comes from different sources seeking to reduce or offset their emissions: i) entities subject to *ETS* or carbon taxes that allow the use of credits as an offset mechanism; ii) countries seeking to meet their Nationally Determined Contributions (*NDCs*); and iii) organizations participating in voluntary offset schemes.

III. Status of carbon markets

Compliance markets

Globally, 75 carbon pricing mechanisms were operating as of April 2024. Of these, 39 are carbon taxes and 36 are *ETSs*. These mechanisms cover about 13 gigatons of CO_2e, representing about 24% of global GHG emissions.

Although the adoption of carbon pricing remains limited and insufficient to achieve the objectives of the Paris Agreement, the last year has seen a new wave of mechanisms driven by middle-income countries. For example, progress in the development of *ETSs* in India and Turkey stands out.

In addition to new implementations, some systems already in operation have announced assessments to expand the scope and coverage of their *ETSs*, as is the case in the European Union, China and England (ICAP, 2025).

One of the relevant advances has been the growth of carbon pricing schemes at the subnational level, which in the last three years have represented half of the instruments implemented at the global level. Also noteworthy is the recent role of multilateral initiatives in carbon pricing for sectors such as aviation and international shipping.[5]

Voluntary markets

Demand for carbon credits continues to be driven largely by voluntary purchases, which account for about 90% of the total. However, demand associated with regulatory compliance is gaining momentum, as more instruments (*ETS* or tax) allow for offsetting through the use of carbon credits, both domestic and international.

On the supply side, loans began a downward trend in 2022. In 2023, their issuance decreased again by 9% compared to the previous year. However, the cumulative volume of credits in the market is increasing due to the fact that the withdrawal of credits has been slightly below their supply.

During 2023, most loans fell in price compared to the previous year. Only some types of loans with specific characteristics -such as those with high collateral benefits or those recently issued- recorded better prices. Nevertheless, there is an improvement in the outlook for supply, driven by new approaches that seek to respond to different demand segments.

Finally, in terms of the design of carbon pricing policies, there is a trend towards more flexible approaches that can be adapted to national circumstances. In many cases, governments choose to combine various instruments: 70% of jurisdictions with regulated markets use more than one instrument.[6]

Latin America and the Caribbean

In 2024, five countries in Latin America and the Caribbean had carbon taxes in place: Mexico,[7] Chile, Colombia, Argentina and Uruguay. Except for Uruguay, the taxes applied in the region are around US dollars 5 per tCO_2e and cover between 20% and 55% of GHG emissions. In Mexico, the carbon tax system started operations at the subnational level since 2014, the states with carbon tax implementation as of April 2024 were: Durango, Guanajuato, Jalisco, Querétaro, Yucatán and

[5] The International Civil Aviation Organization is leading the Carbon Offsetting and Reduction Scheme for International Aviation (*CORSIA*), which obliges airlines to purchase carbon credits to offset emissions that exceed their baseline. The mandatory phase of *CORSIA* will begin in 2027. On the other hand, the International Maritime Organization adopted a strategy that contemplates the development of a carbon pricing instrument, which is currently under development.

[6] Some jurisdictions use a second instrument to complement the coverage of GHG emissions. For example, in sectors that are not covered by an ETS, a second instrument is applied, usually in the form of a carbon tax. Coexistence of instruments may also be due to the parallel use of a national-level instrument and subnational instruments.

[7] The carbon tax system in Mexico is at the subnational level and it begun in 2014.

Zacatecas.[8] Meanwhile, Uruguay applies the highest carbon tax globally (164 US dollars per tCO_2e); however, its coverage is limited, as it covers barely 4% of GHGs.

In the region, Mexico has an emissions trading system that has been operating in a pilot phase since 2020, which covers the industry and energy sectors, representing close to 40% of national emissions.[9] Argentina and Colombia have initiatives in the process of design or formalization. In Brazil, the law regulating the carbon market was approved at the end of 2024, allowing the first phases of the Brazilian Emissions Trading System (SBCE) to begin (ICAP, 2025).

European Union

In 2021, the European Union (EU) presented the proposal for the EU Carbon Border Adjustment Mechanism (*CBAM*), with the aim of equalizing the price of carbon between products manufactured in the EU and imported products (European Parliament, 2022). This measure seeks to reduce the risk of carbon leakage and encourage emissions reductions at a global level.

The *CBAM* covers five industrial sectors: steel, cement, fertilizers, aluminum and power generation. As of 2023, the mechanism entered a transition phase in which importers of these products only report their GHG emissions. From 2026, the *CBAM* will be fully operational and importers will be required to hold an authorization and purchase carbon certificates corresponding to the price that would have been paid for the emissions that would have been emitted in the production of these goods within the European Union.

IV. Challenges

Carbon markets have the potential to mobilize resources for the transition to low-carbon economies and for compliance with the *NDCs*. However, challenges facing these markets need to be addressed, including:

Low prices and coverage: Although carbon pricing instruments have grown significantly in the last decade, both GHG emissions coverage and prices remain below the level needed to achieve the Paris Agreement targets. Of all existing mechanisms, only seven[10] have prices consistent with recommendations to limit global warming below 2°C.

Fragmentation and lack of standardization: Fragmentation of the carbon credit market is expected to persist in the short term, driven by the diversity of preferences, the variety of demand segments and the heterogeneity of standards for defining credit quality.

Integrity and credibility: The environmental and financial integrity of carbon credits remains a major concern. For these markets to scale, greater clarity in quality criteria is required. On the demand side, the quality of the credits being issued plays an important role, for which the Integrity Council for the Voluntary Carbon Market (*ICVCM*) established a new quality parameter.

On the demand side, it is also expected that credits will be used as a complement -and not as a substitute- for direct actions to reduce emissions within the operations and value chains themselves, which in turn seeks to avoid *greenwashing* practices (Raji, 2023).

Evolving regulation: Article 6 of the Paris Agreement allows for international cooperation to meet emission reduction commitments. At COP29, an agreement was reached to advance international emissions trading systems under this article, with rules that seek to strengthen transparency and market confidence. However, these are still in the process of consolidation, which generates a degree of uncertainty.

On the one hand, the implementation of the *CBAM* represents a structural change in global carbon

[8] As of April 2024, taxes were under consideration in the states of: Colima, San Luis Potosi and Tamaulipas.

[9] Originally, the Emissions Trading System Test Program in Mexico was designed to have a three-year duration starting January 1, 2020, with a two-year pilot phase and a one-year transition phase (DOF, 2019). However, the program currently remains in the pilot phase and work is still underway to formalize its transition to the operational phase. It also includes the use of an offset mechanism through voluntary market credits for up to 10% of compliance obligations.

[10] Carbon taxes in: Finland, Liechtenstein, Netherlands, Norway, Sweden, Switzerland and Uruguay.

pricing. This mechanism could boost global pricing, but it also presents implementation challenges and has generated resistance among some trading partners.

V. Final considerations

Well-designed carbon markets can incentivize the redirection of capital towards clean technologies, which would help reduce the long-term financial risks associated with climate change and thereby strengthen financial stability. Carbon pricing instruments in regulated markets, such as carbon taxes and *ETSs*, are effective and efficient tools for mitigating climate change. Such instruments are estimated to have reduced global GHG emissions by 4% to 15% by March 2022 (MSCI, 2024). Moreover, the mere existence of a compliance market can signal the long-term direction of climate regulations and, together with complementary policies, encourage investment in cleaner technologies.

At the same time, there has been significant growth in projects and investments in the voluntary market, driven by corporate commitments to net-zero emissions and pressure from investors. In addition, this dynamism promotes improvements in the governance, transparency and environmental quality of carbon credits.

While voluntary markets can complement mitigation efforts, compliance markets are essential to achieve large-scale emission reductions.

Finally, voluntary markets can function as an initial platform for the implementation of mandatory systems, as they allow for the development of institutional and technical capacities, in addition to identifying mitigation opportunities. In this sense, the strengthening of such capacities in the public and private sectors is key to ensure the design and effective operation of robust and credible carbon markets, both voluntary and regulated.

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Transition risk

The transition toward a more sustainable economy poses significant challenges for financial stability. As awareness of the need to protect the environment grows, several countries have implemented regulations to promote more sustainable practices, such as the reduction of greenhouse gas emissions. This requires companies to transform their production processes and meet an increasing demand for goods and services with less environmental impact.

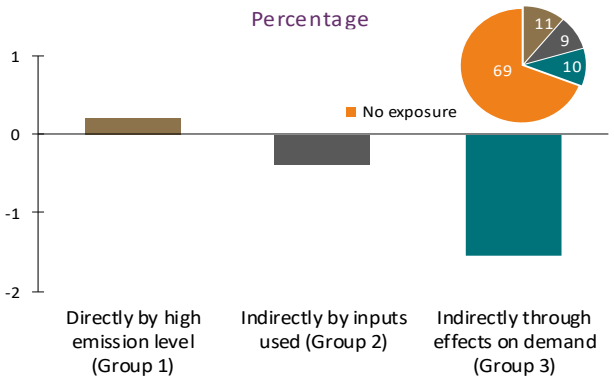
If this process unfolds abruptly or without adequate planning, it could put a strain on the financial system. For example, rapid or unexpected changes in this demand or in regulatory requirements may increase operating costs in sectors that depend on polluting technologies and reduce the value of their goods and services. As a result, some companies may face difficulties in meeting their credit obligations, which could increase their non-performing loan ratios. Consequently, it is imperative for financial intermediaries to incorporate these transition risks into their credit analysis and risk premiums.

This section undertakes an analysis of the exposure of commercial bank corporate credit to the risks derived from the transition to a more sustainable economy. For this purpose, economic sectors are grouped into three categories, according to the nature of their exposure:[101] the first group contains those sectors that generate high carbon emissions directly in their production processes (Group 1); the second group includes sectors that do not generate emissions directly, but depend on inputs that produce high carbon emissions (Group 2); and the third group comprises sectors whose demand is closely tied to polluting industries (Group 3).[102]

This classification is complemented by an analysis of the characteristics of the firms in each group. This makes it possible to identify vulnerabilities that could either mitigate or amplify the impacts in the event of transition risks crystallize.

A rebalancing in the exposure of corporate credit to these risks is observed, with an increase in commercial banks' direct exposure (Group 1) and a reduction in indirect exposure (Groups 2 and 3), representing a shift from the previous trend (Graph 150). A higher direct exposure suggests that the initial effects of a materialization of these risks could be more relevant.

Graph 150
Portfolio balance changes in sectors exposed to transition risks
Percentage



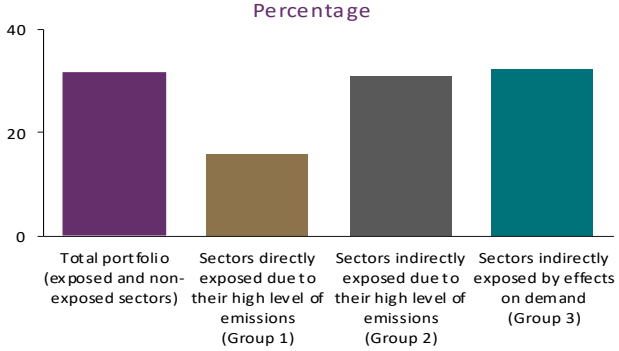
Data as of December 2024.
Source: Banco de Mexico, CNBV and INEGI.

In a context of lower economic dynamism, this rebalancing could reflect both a reduced appetite for risk and the particular characteristics of the firms in each group. Directly exposed sectors (Group 1) are dominated by less vulnerable companies, that may be better positioned to face an environment of slower economic growth. In fact, in this group there are fewer small-sized companies and fewer recently established firms (Graph 151a and Graph 151b). Therefore, in this group, firms tend to have more of their own resources to withstand adverse events and greater capacity to develop strategies to mitigate the impact of transition risks. Therefore, while banking now faces more direct exposure, the companies most affected could also be the most resilient.

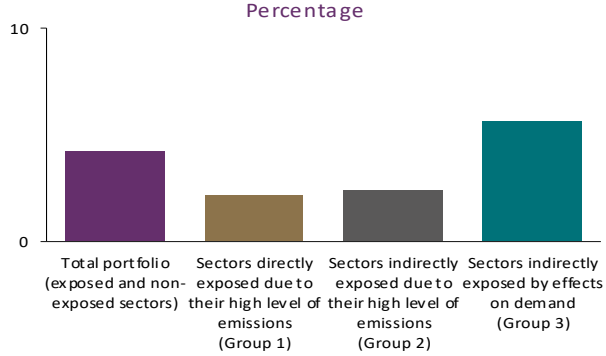
[101] For more details on sector classification, see the Financial Stability Report - December 2020.

[102] The definition of Group 2 is linked to Scopes 2 and 3 of the GHG protocol, as these scopes consider that companies can generate emissions, even if they occur physically in the facility producing the inputs rather than at the company consuming them. In other words, companies can emit indirectly through the use of inputs. On the other hand, the definition of Group 1 is directly related to the definition of Scope 1.

Graph 151
Portfolio in sectors exposed to transition risks, by type of exposure
a) Portfolio percentage to SMEs
Percentage



Portfolio in sectors exposed to transition risks, by type of exposure
b) Portfolio percentage to new enterprises
Percentage

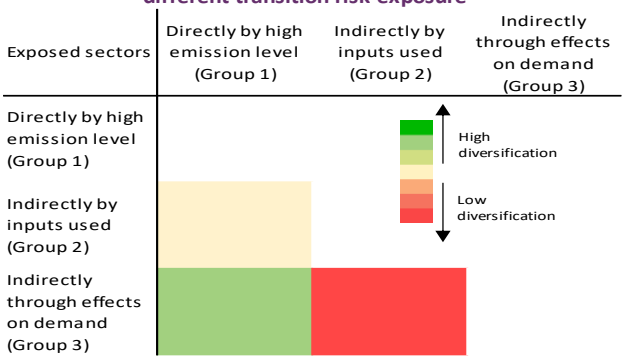


Data as of December 2024.
Source: Banco de Mexico, CNBV and INEGI.

In regard to portfolio diversification, banks with greater directly exposed portfolios reduced their indirect exposure in Group 2 sectors, but increased it in those in Group 3 (Graph 152). As a result, these banks could be more affected if a disorderly transition were to affect simultaneously both the companies that emit high levels of carbon dioxide (CO_2) and those whose demand depends on these polluting industries.

In addition, the most directly exposed banks (Group 1) are those with more characteristics that could mitigate the effects, such as higher capitalization (Graph 153). In contrast, those financial entities with more indirect exposure through Group 3, financing companies whose demand is more dependent on polluting industries, have fewer factors that could amplify the effects, such as lower liquidity and profitability.

Graph 152
Portfolio diversification among sectors with different transition risk exposure[1/]

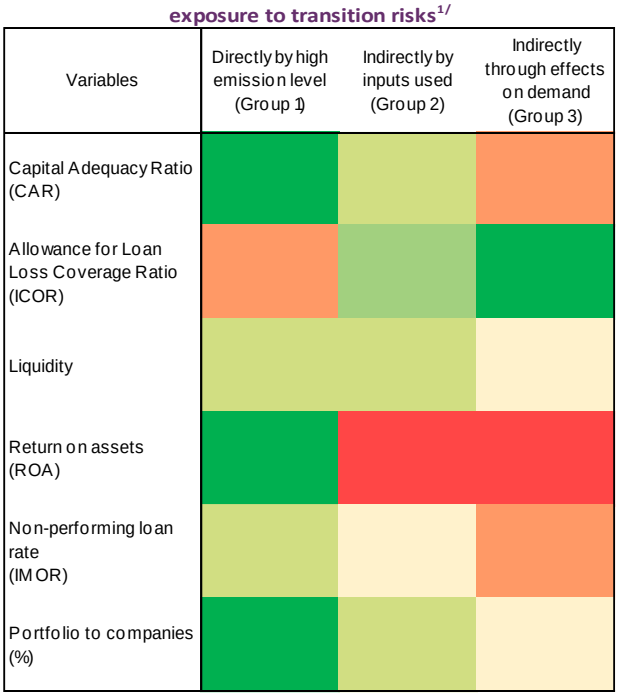


Data as of December 2024.

Sourcee: Banco de México, CNBV and INEGI.

1/ The colors show how diversified the portfolio is against these risks. The red color means less diversification, while the green color means more diversification. Diversification is based on the correlation coeffcicient between each bank's credit portfolio share in sectors exposed to different transition risks.

Graph 153
Risk amplifiers and mitigants, depending on the bank's exposure to transition risks[1/]



Data as of December 2024.
Source: Banco de Mexico, CNBV and INEGI.
1/ Shades of green show mitigating effects while shades of red show amplifying factors. The color is defined by the correlation coefficient between each factor considered and the credit portfolio shares in each sector subject to transition risks.

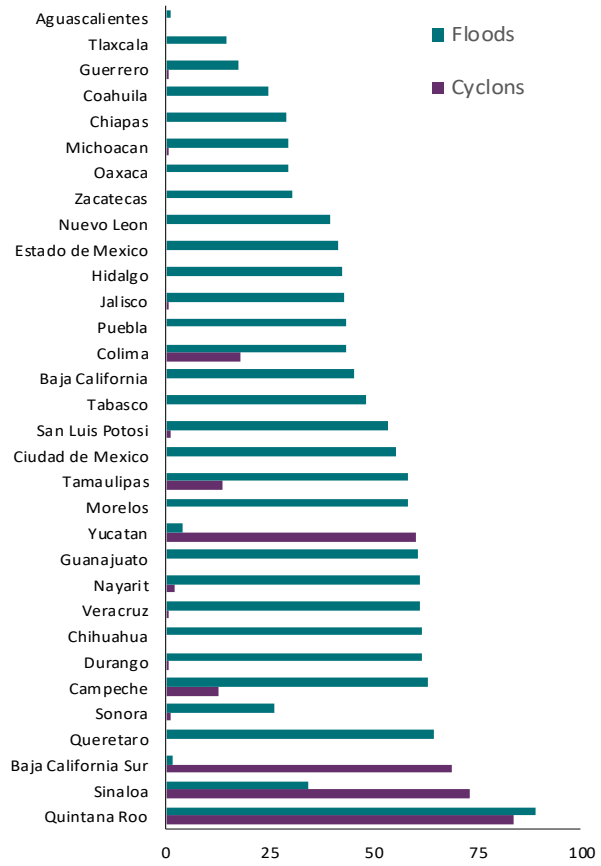
Physical risks: Loan portfolio to companies

This section studies the exposure of commercial banks' corporate loan portfolio to four hydrometeorological phenomena: floods, tropical cyclones, droughts and heatwaves. These events may cause material damages that raise operating costs and reduce companies' revenues, thereby increasing the risk of credit default.[103] In addition, the intensity and frequency of these events are expected to increase in the coming years.

To measure the exposure of the corporate portfolio to the four phenomena, the credit granted in the sectors and regions exposed to each of them is identified. To this end, first, the credit granted in the municipalities where each phenomenon could occur is determined. Then, within these municipalities, only the credit allocated to sectors vulnerable to that specific type of phenomenon is considered. This portfolio exposure measure is calculated for the different states and banks in Mexico.[104]

Of the four events, floods remain the hydro-meteorological phenomenon to which corporate credit is most exposed (Graph 154 and Graph 155). Unlike what had been occurring over the last three years, on this occasion, in addition, exposure to floods increased. Furthermore, in contrast to the previous *Report*, exposure increased for all four analyzed phenomena, with notable increases in the case of cyclones and floods.

Graph 154
Portfolio in sectors and municipalities vulnerable to cyclons and floods
Percentage

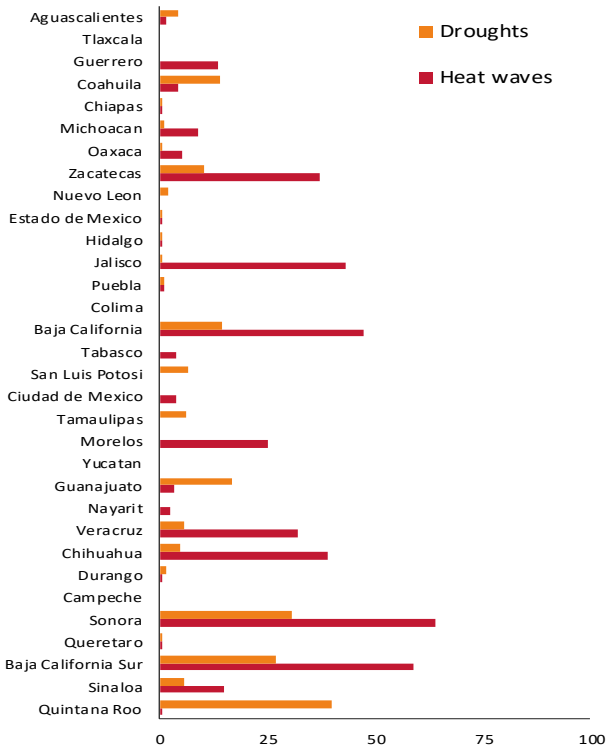


Data as of June 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.

[103] See Box 7 of *Financial Stability Report - June 2024, which analyzes* how droughts can exacerbate water scarcity and, consequently, increase non-performing loan ratios.

[104] The study *Thermal stress and financial distress: Extreme temperatures and firms' loan defaults in Mexico* by Aguilar-Gómez et al. (2024) confirms that an unusually high number of days with extreme temperatures has a negative impact on firms' credit performance Mexico.

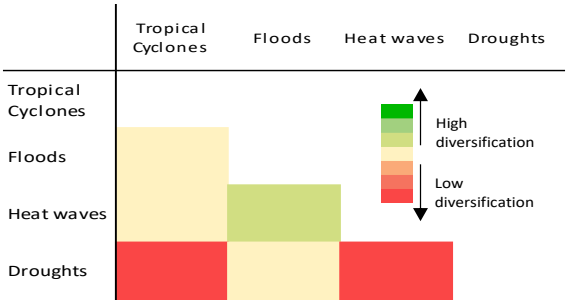
Graph 155
Portfolio in sectors and municipalities vulnerable to heat waves and droughts
Percentage



Data as of December 2024.
Source: Banco de México, CENAPRED, CNBV and INEGI.

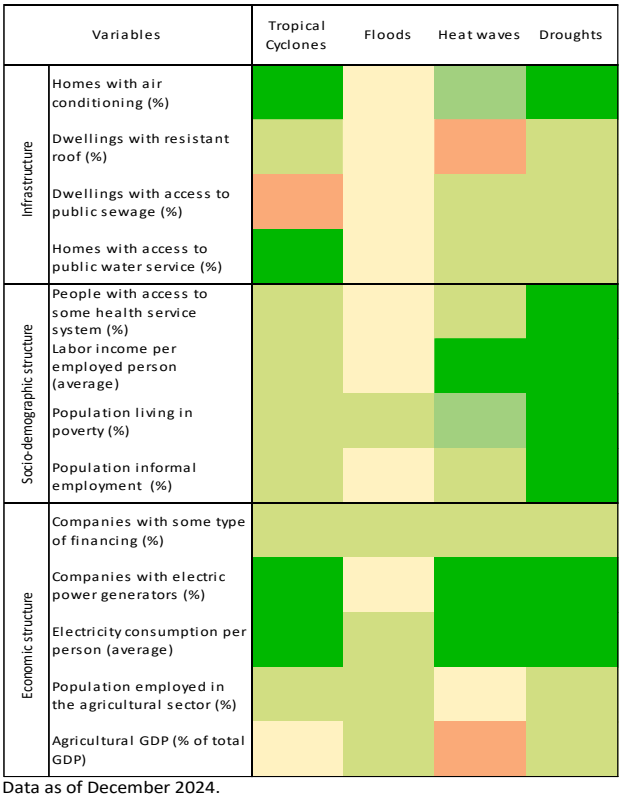
Likewise, the portfolio shows little diversification in the face of the possible materialization of these two events in a short period. In particular, the states most exposed to floods are those with the greatest exposure to cyclones. Therefore, these are states in which the impacts could be greater if cyclones and floods were to affect the same region in a short period (Graph 156). However, among the states with greater exposure to cyclones, there are now some with a higher level of development —for example, higher electricity consumption per capita— which could make them more resilient to the materialization of this phenomenon (Graph 157).

Graph 156
Portfolio diversification among sectors and municipalities exposed to different hydro-meterological events (for different states) 1/



Data as of December 2024.
Source: Banco de México, CENAPRED, CNBV and INEGI.
1/ The colors show how diversified the portfolio is against these risks. The red color means less diversification, while the green color means more diversification. Diversification is based on the correlation coeffcicient between each state's share of loan portfolios exposed to different hydro-meteorological events.

Graph 157
Amplifying and mitigating factors of physical risks (for different states)1/



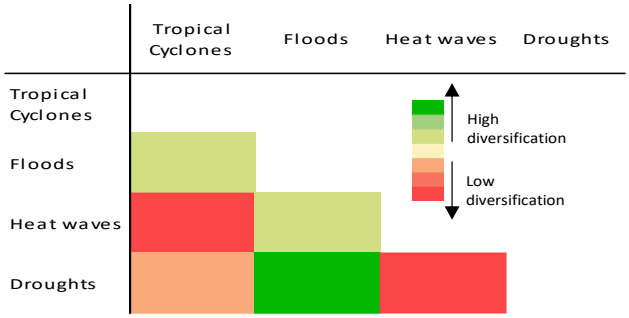
Data as of December 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.

1/ Shades of green show mitigating effects while shades of red show amplifying factors. The color is determined by the correlation coefficient between each factor and the shares of credit portfolios for each sector and state exposed to the different hydro-meteorological events.

For banks, it is also observed that the portfolio is poorly diversified in the face of the possible materialization of cyclones. In fact, this diversification of the possibility that cyclones and droughts affecting the same region in a short period decreased (Graph 158). However, the banks with the greatest exposure to cyclones are those that also have more characteristics that could mitigate the effects. In particular, these banks are the ones with more liquidity and less non-performing loan ratios, which makes them more resilient (Graph 159).

Graph 158

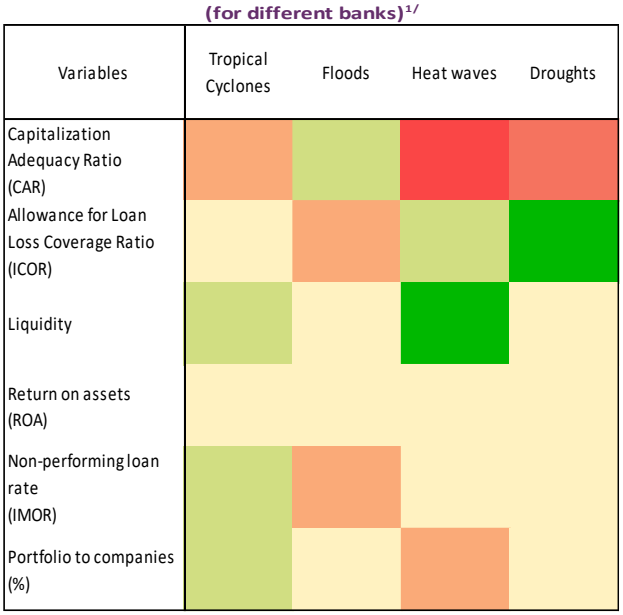
Portfolio diversification among sectors and municipalities exposed to different hydrometeorological events (for different banks)[1/]



Data as of December 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.
1/ The colors show how diversified the portfolio is against these risks. The red color means less diversification, while the green color means more diversification. Diversification is based on the correlation coefficient between each bank's share of loan portfolios exposed to different hydro-meteorological events.

Graph 159

Factors amplifying and mitigating physical risks (for different banks)[1/]



Data as of December 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.
1/ Shades of green show mitigating effects while shades of red show amplifying factors. The color is determined by the correlation coefficient between each factor and the shares of credit portfolios for each sector and state exposed to the different hydro-meteorological events.

Physical risks: Mortgage and consumer loan portfolios

In this section, the analysis of physical risks is extended to mortgage and a portion of consumer credit, including the payroll, automotive, personal and revolving loan portfolios. The same four hydrometeorological phenomena as in the previous section are evaluated. To identify the credit exposed in each portfolio, a similar methodological process is used, which considers the municipality and the sector in which the financing is granted.[105]

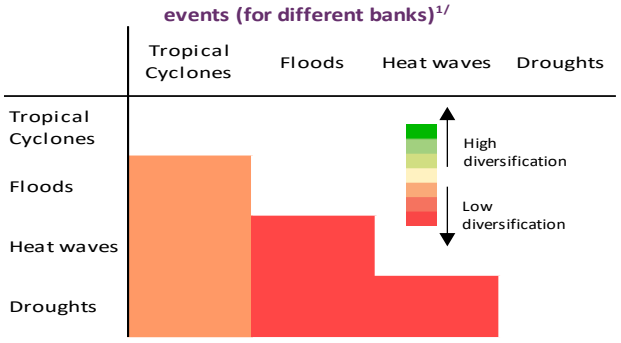
Floods persists as the phenomenon to which mortgage loans are most exposed. However, unlike corporate credit, this exposure continued its downward trend. Conversely, exposure to the other three phenomena increased, with a notable increase in the case of cyclones.

[105] The same four hydro-meteorological events that were analyzed for the corporate portfolio are considered, and a similar process is followed to identify the exposed credit. Credit in the regions and sectors exposed to each type of hydrometeorological event is identified. Then, the proportion of the portfolio in the sectors at risk is estimated through two steps: the first consists of identifying, for each municipality, the share of the portfolio associated with high and low wages; and in the second step, this information is combined with employment data from the last census, approximating the portfolio in sectors at risk based on the share of formal employment in those sectors, differentiated by wage levels.

The diversification in mortgage loans remains at a low level and has seen a further deterioration in the case of the phenomenon for which exposure increased the most, namely, tropical cyclones. In particular, the banks most exposed to cyclones now also show greater exposure to heatwaves (Graph 160). However, despite this lower diversification, there are now more features that could mitigate the impact, as the banks most exposed to all four phenomena now have higher capitalization ratios (CAR) (Graph 161).

Graph 160

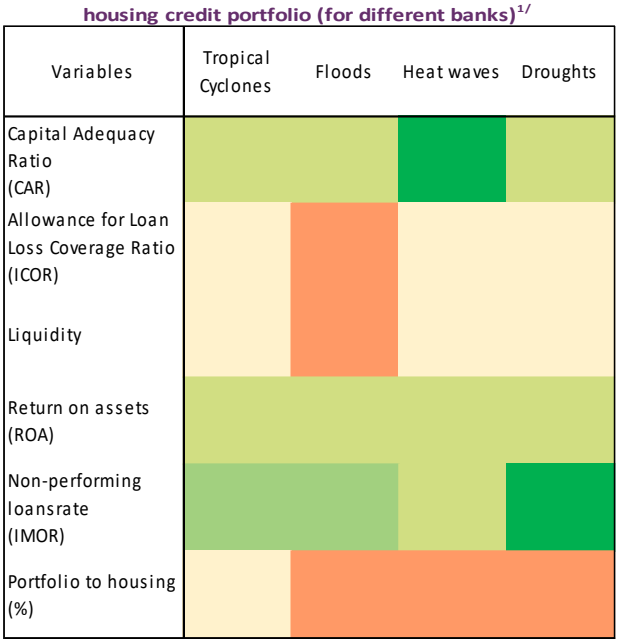
Housing loan portfolio diversification among sectors and municipalities vulnerable to different hydro-meteorological events (for different banks)[1/]



Data as of December 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.
1/ The colors show how diversified the portfolio is against these risks. The red color means less diversification, while the green color means more diversification. Diversification is based on the correlation coefficient between each bank's share of loan portfolios exposed to different hydro-meteological events.

Graph 161

Amplifying and mitigating factors of physical risks in the housing credit portfolio (for different banks)[1/]

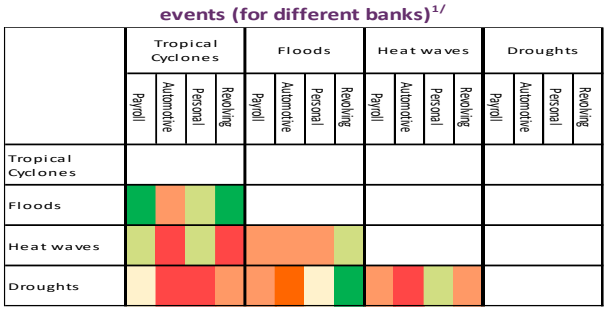


Data as of December 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.
1/ Shades of green show mitigating effects while shades of red show amplifying factors. The color is determined by the correlation coefficient between each factor and the shares of credit portfolios for each sector and municipality exposed to the different hydro-meteorological events.

In consumer credit -payroll, auto, personal and revolving-, floods remain the phenomenon to which banks are most exposed, although with a downward trend, as in mortgages, but unlike the corporate credit portfolio. However, diversification in the face of this phenomenon decreased. In particular, banks most exposed to floods are now also more exposed to heat waves, except in the payroll segment (Graph 162). On the contrary, for floods, but also in general for all phenomena, the banks with the highest exposure now have higher profitability (ROA), which could make them more resilient (Graph 163).

Graph 162

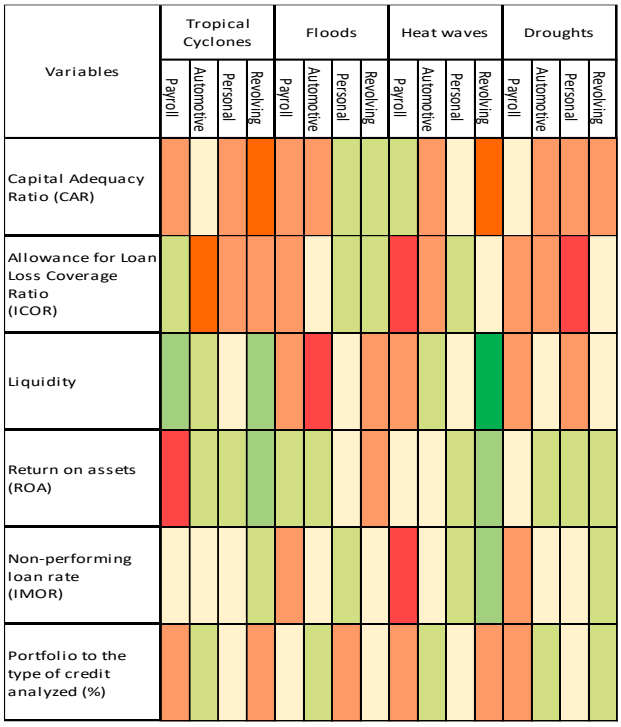
Consumer loan portfolio diversification among sectors and municipalities vulnerable to different hydro-meteorological events (for different banks)[1/]



Data as of December 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.
1/ The colors show how diversified the portfolio is against these risks. The red color means less diversification, while the green color means more diversification. Diversification is based on the correlation coeffcicient between each bank's share of consumer loan portfolios exposed to different hydro-meteorological events.

Graph 163

Amplifying and mitigating factors of physical risks in the consumer credit portfolio (for different banks)[1/]



Data as of December 2024.
Source: Banco de Mexico, CENAPRED, CNBV and INEGI.
1/ Shades of green show mitigating effects while shades of red show amplifying factors. The color is determined by the correlation coefficient between each factor and the shares of credit portfolios for each sector and state exposed to the different hydro-meteorological events.

Mexican financial system sustainability dashboard

In order to monitor the financial risks related to climate change and the degradation of nature for the Mexican financial system, a dashboard was designed consisting of fifteen indicators grouped into four categories: i) economic activity; ii) climate change; iii) physical and transition risks; and iv) sustainable finance.

This section presents the evolution of the indicators that make up the dashboard.[106]

Category 1: Economic activity (Table 6)

Between 2003 and 2023, greenhouse gas (GHG) emissions increased, particularly carbon dioxide (CO_2, 41.7%) and methane (CH_4, 20.3%). However, CO_2 emissions intensity per unit of output in the energy and industry sectors decreased by 35.1% and 27.5%, respectively, suggesting efficiency improvements.

In terms of energy transition, solar and wind power generation soared, with increases of more than 250,000% and 108,000%, respectively, although fossil fuel generation still represents a significant proportion.

In addition, renewable energy consumption as a percentage of total final energy consumption grew 27.5%.

The Ecological Net Domestic Product (PINE, its acronym in Spanish)[107] - a metric that adjusts traditional GDP by incorporating the cost of natural resource depletion and environmental degradation - increased its gap to GDP by nearly 190%, reflecting a significant increase in environmental costs over the past two decades.

Category 2: Climate change (Table 6)

The annual variation of the mean temperature doubled in two decades, from 0.83°C in 2003 to 1.76°C in 2023 (111% increase), which is consistent with the advance of global climate change.

Between 2003 and 2023, the number of tropical cyclones registered in Mexico showed a slight

[106] For further details on its methodology and composition, please refer to Box 4 of the 2024 Second Half Financial Stability Report.

[107] The PINE is calculated by deducting from the net domestic product the costs associated with the depletion of natural resources (including hydrocarbons, forest resources and groundwater) and environmental degradation (particularly soil, water and air pollution).

increase (13.5%). Although this variation is moderate, it highlights the persistence of these phenomena with the potential to cause significant impacts. In contrast, a significant deterioration in the country's water conditions is identified, given that the drought severity index[108] increased by 179.5% in the same period.

In terms of natural resources, the area of forests has remained practically unchanged, but there has been a reduction in deforestation for pastureland (-21.3%) and a worrying increase of 76.8% in deforestation for agricultural land, reflecting the growing pressure of the agricultural sector on forest ecosystems.

Table 6

Mexican financial system sustainability dashboard

Indicator	Breakdown	Metric	Period					Percentage change over the period
			2003	2008	2013	2018	2022 / 2023 [1]	
Category 1: Economic activity								
Emissions of greenhouse gases (GHG) and carbon dioxide (CO2)								
Total GHG emissions by type of gas	Carbon dioxide	mtCO2e	354	406	508	491	502	**41.7**
	Methane	mtCO2e	138	151	153	158	166	**20.3**
CO2 emissions by sector	Energy	Percentage of total	63	62	64	64		**1.2**
	Industry	Percentage of total	30	30	28	27		**-10.2**
CO2 emissions intensity	Energy	tCO2 / million USD of production.	11,816	7,704	8,011	7,669		**-35.1**
	Industry	tCO2 / million USD of production.	4,179	3,206	3,200	3,028		**-27.5**
Energy transition								
Energy generation by type of source	Fossil Fuels	Gigawatt-hours	197,072	212,265	245,841	277,314	266,122	**35.0**
	Hydroelectric power	Gigawatt-hours	19,880	39,194	28,002	32,526	35,851	**80.3**
Renewable energy generation	Solar Energy	Gigawatt-hours	8	19	106	1,364	20,557	**256,862**
	Wind Energy	Gigawatt-hours	19	269	4,185	12,877	20,629	**108,473**
Renewable energy consumption	Renewable energy consumption	Percentage of total final energy consumption	10	10	9	10	13	**27.5**
Environmentally Adjusted Net Domestic Product (PINE)								
Gap between PINE and GDP	Total	Billions of pesos at market prices, 2018 basis		2,562	3,518	5,507	7,425	**189.8**
Category 2: Climate change								
Annual temperature								
Annual variation of the mean temperature with respect to the reference period 1951-1980	Total	Degrees Celsius	0.83	0.55	0.76	1.19	1.76	**111.1**
Climate-related disasters								
Weather-related natural disasters by disaster type	Tropical cyclones	Number of tropical cyclones	37	35	33	41	42	**13.5**
	Droughts	Annual index of droughts severity	1,508.2	1,909.3	752.9	1,786.1	4,215.9	**179.5**
Forests and Carbon	Total forest area	Hectare	35	35	34	34	34	**-3.7**

[108] The drought severity index is a composite measure that combines extent (how many municipalities are affected) and intensity (how severe the drought conditions are).

Mexican financial system sustainability dashboard								
Indicator	Breakdown	Metric	Period					Percentage change over the period
			2003	2008	2013	2018	2022 / 2023 [1]	
Deforestation								
Annual area deforested by transition type	Pastures	Hectare	136,739	149,195	192,270	102,038	107,566	**-21.3**
	Agricultural land	Hectare	43,615	40,743	51,459	64,299	77,124	**76.8**

Data as of April 2025.
Source: Banco de México with information from IMF, ECB, Bundesbank, Network for Greening the Financial System, World Bank, INEGI, CONAGUA, SAMOF.
1/ Information for 2023, except for the following indicators: energy generation by type of source, renewable energy generation and forest area with latest available year 2022; renewable energy consumption has information available until 2021.
2/ Total CO2 emissions for the energy sector include transportation.
3/ mtco2e: metric tons of CO2 equivalent. CO2 equivalent is a standardized measure that compares the global warming potential of a greenhouse gas to that of CO2.
4/ Blank cells do not have information available or the breakdown presented.

Category 3. Physical and transition risks (Table 7)

Mexico's global climate risk index has remained stable between 2018 and 2022, with a slight increase of 4.26%, indicating a continued exposure to climate-related physical risks, without significant improvements in its vulnerability.[109]

Category 4: Sustainable Finance (Table 7)

Sustainable finance has shown accelerated growth. The total amount of labeled bond issuance grew by more than 1,900% between 2018 and 2023, led by government (11,154%) and corporate (4,280%) issuance. This dynamism reflects a growing interest in financing projects with environmental or social benefits.

Regarding the interest of financial institutions in sustainable finance, it highlights the number of signatories in Mexico of the Principles for Responsible Investment[110] (PRI) increased from 5 in 2018 to 36 in 2023, representing a notable strengthening of the financial sector's commitment to the integration of Environmental, Social and Corporate Governance factors in their investment decisions. On the other hand, the Sustainability Protocol for Banking in Mexico registered 42 signatories in 2023, also reflecting a greater institutional commitment of the banking system to sustainability.

Table 7

Mexican financial system sustainability indicators dashboard								
Indicator	Breakdown	Unit	Period					
			2018	2019	2020	2021	2022	2023
Category 3: Physical and transitional risks								
Physical risk index								
INFORM climate risk index	Total	Index	4.70	4.90	4.80	4.90	4.90	
Category 4: Sustainable finance								
Labeled bonds								
Amount of bond issuance bonds labeled by type of issuer.	Development banks	Billions of pesos	5.1	9.5	13.5	37.3	33.4	41.1

[109] The INFORM Climate Risk Index is a global risk assessment adjusted by the IMF for climate risks. The index is composed of three dimensions: climate hazard and exposure, vulnerability, and lack of response capacity:
- Climate-driven hazard and exposure reflects the probability of physical exposure associated with specific climate hazards.
- Vulnerability represents the economic, political and social characteristics of the country that can be destabilized in the event of a threat.
- Lack of coping capacity refers to a country's ability to cope with disasters in terms of formal and organized activities and effort by the country's government, as well as existing infrastructures that contribute to disaster risk reduction.

[110] PRI signatories commit to integrate Environmental, Social and Corporate Governance (ESG) factors into their investment decisions.

Mexican financial system sustainability indicators dashboard								
Indicator	Breakdown	Unit	Period					
			2018	2019	2020	2021	2022	2023
	Commercial Banking		3.5			2.5	10.0	12.0
	Multilateral banking		2.5		8.0	7.5	5.5	8.5
	Corporate		1.8	0.7	26.4	104.9	65.2	78.8
	Government		1.1		18.8	33.2	107.3	123.8
	Parastatals						46.0	20.0
ESG (Environmental, Social and Corporate Governance) Framework Principles								
Signatories to the Principles for Responsible Investment in Mexico	Total	Number of signatories	5	11	22	27	33	36
Signatories of the Sustainability Protocol for Banking in Mexico[2]	Total	Number of signatories				39	40	42

Data as of April 2025.
Source: Banco de México with information from the IMF, CMFS, PRI, Mexican Banks' Association (ABM).
1/ Blank cells do not have information available or the breakdown presented.
2/ On May 8, 2025, the update of the Sustainability Protocol for Banking in Mexico launched in 2016 was published.

Sustainable Finance Committee (CFS, its acronym in Spanish)

The working groups of the Sustainable Finance Committee (CFS), within the Financial System Stability Council (CESF, its acronym in Spanish), continued to meet during the first half of 2025. These groups were established by the CFS to develop assessments, proposals, recommendations and training on various aspects of sustainable finance, such as: taxonomies, integration of environmental and social risks, mobilization of sustainable financing, and disclosures of Environmental, Social and Corporate Governance factors by issuing companies and financial institutions.

During this period, the Third Annual Report of the Sustainable Finance Committee (CFS) was published, describing the status of sustainable finance and the activities carried out by the CFS.[111]

As for the climate scenario analysis pilot, training was provided to participating institutions, which sent preliminary results after implementing the methodology. The consolidated results of this exercise are expected to be released in the second half of 2025.

CFS, through Banco de México, continued work on the creation of a digital repository for learning and collaboration in sustainable finance.

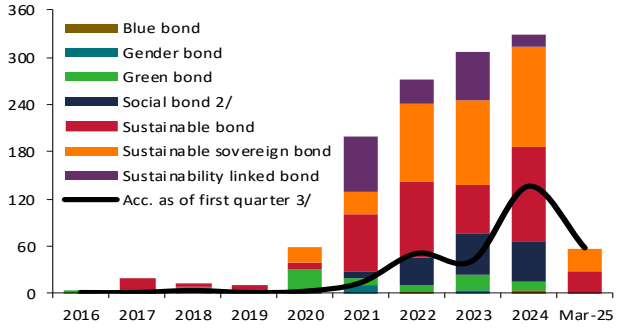
Sustainable financial assets

The thematic bond market allows companies and other issuers to increase the diversification of their financing sources considering sustainability criteria. However, during the first quarter of 2025 there was a decrease in the dynamism of the issuance of this type of instruments in relation to the placements in the same period of 2024, particularly in relation to private sector issues (Graph 164).

Against this backdrop, it is worth mentioning that the highest level of placement of thematic bonds in 2024 is due to the public sector, as the amount issued of this type of bonds by non-financial domestic companies was the lowest observed since 2020, thus decreasing their share within the total placed in the domestic market.

[111] The report is available on the Financial System Stability Council (CESF, its acronym in Spanish) website at https://www.cesf.gob.mx/es/CESF/Publicaciones_e_informes

Graph 164
Issuance of sustainable, green, social and gender bonds 1/
Billions of pesos

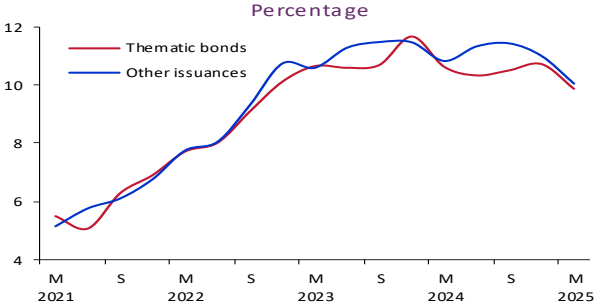


Data as of March 2025.
Source: Consejo Mexicano de Finanzas Sostenibles and Indeval.
1/ At face value.
2/ Includes COVID-19 social bond.
3/ Accumulated issued amount as of first quarter per year not considering bond type.

The demand for thematic bonds issued in Mexico is mainly concentrated in institutional investors, particularly siefores and investment funds.

On the other hand, there is no significant difference between the rates paid for bonds linked to Environmental, Social and Corporate Governance (ESG) criteria and the rest of the corporate issues, which could suggest that the demand for this type of bonds is more related to the adoption of investment criteria that consider an ESG agenda, than to other types of factors (Graph 165).

Graph 165
Corporate bond yields in domestic currency: thematic bonds and other issuances 1/
Percentage



Data as of March 2025.
Source: Consejo Mexicano de Finanzas Sostenibles, Indeval, Valmer and PIP.
1/ Corporate bonds are defined as the total issuance of domestic securities excluding government securities.

IV.4. Financial markets infrastructures

Central securities depository institutions and securities settlement systems

The Securities Deposit, Administration and Settlement System (DALI), managed by Institución para el Depósito de Valores, S. A. de C. V. (Indeval) is the financial market infrastructure, in charge of the securities depository and settlement of all transactions, including trading, repurchase, repurchase and securities lending that are settled in the Mexican financial market.

At the end of April 2025, the accumulated availability level of the DALI services was 100.00%. The cumulative availability of peripheral services in the same period was 100.00%, such services correspond to:

- Repo and Valuation Management Services (SAVAR) administers collateral for repurchase transactions with terms of more than three days in Mexico;
- Specialized securities lending facility (Valpre E) administers securities lending in Mexico related to the SHCP's market makers program, and;
- Securities lending facility for DALI participants (Valpre FV) allows the arrangement of securities lending between financial institutions in Mexico.

At the end of April 2025, the average daily settlement amount on the DALI was 5.59 trillion pesos. Of the total amount traded, 84.2% corresponded to repurchase transactions, 9.1% to buy-sell transactions and 6.7% to other transactions.[112]

Central counterparties (CCP)

A central counterparty is a financial market infrastructure that interposes itself between parties entering into financial transactions, becoming a buyer to every seller and a seller to every buyer.

The Contraparte Central de Valores, S.A. de C.V. (CCV) and the Asigna Compensación y Liquidación (Asigna)

[112] Other" is considered as "other" the transactions of the Primary Auction of domestic debt securities or repurchase of domestic debt securities, transfers against payment DVP custodians and transactions for payment of interest, dividends, repayments or any other transaction linked to a securities transaction.

trust are the central counterparties established in Mexico to clear and settle securities and derivatives transactions, respectively. CCV and Asigna have procedures and methodologies for requesting financial resources from their participants to cover the credit and liquidity risk exposures that these infrastructures assume as a result of their role as reciprocal debtor and creditor of the financial transactions they clear and settle. The Initial Margin Fund and the Default Fund are composed of these resources. The Initial Margin Fund is made up of guarantees provided by the participants of the central counterparties, also known as Clearing Members, and the clients of such members to cover their market risk and liquidity risk exposures, in the event that the credit risk of a Clearing Member materializes. In turn, the Default Fund is constituted by the Clearing Members with collateral that can be mutualized to address a default, particularly in stressed market conditions.

During the first half of 2025, Asigna and CCV have covered their risk exposures consistent with the resources required as guarantees for the Initial Margin Funds and the Default Funds. In the case of Asigna, its Safety Net[113] is 35,086 million pesos, which is mainly composed of an Initial Margin Fund of 30,336 million pesos[114] , with 71.95% cash resources, as well as a Default Fund of 3,658 million pesos, composed entirely of cash resources.[115]

On the part of CCV, its Safety Net is 6,695 million pesos and is mainly composed of an Initial Margin Fund of 4,348 million pesos, with 99.17% cash resources, as well as a Contribution Fund of 1,621 million pesos, composed of cash resources.[116]

During the first half of 2025, the Asigna and CCV systems have presented a cumulative availability level of 100.00%.

IV.5. Other risks of the financial system

IV.5.1. Operating continuity risks

The Financial Markets Infrastructures and payment systems that Banco de México manages and operates must maintain a high availability level due to their systemic importance. At the end of the first quarter of 2025, the average availability rate of the two SPEI instances was 99.998%, which represents, on average, 9 minutes of unavailability considering both instances, mainly because of the time required to perform maintenance to the infrastructure that supports the operation of the system.

On the other hand, during this period, we conducted several exercises of the business continuity mechanisms implemented jointly with the participants in order to verify that the necessary elements are in place to deal with any event that could affect the availability of both, the central infrastructure and the participants.

IV.5.2. Cybersecurity Risk

Cybersecurity risks remain among the most relevant for the financial system, given the increase in frequency and sophistication of cyberattacks. In the global environment, an increase in cyber risks in organizations is reported, the advance of adversaries driven by generative Artificial Intelligence (AI) and a notable increase in attacks on supply chains.[117] A successful cyberattack affecting a systemically important financial institution[118] could disrupt services, negatively affect public confidence, and have serious economic and reputational implications. A high degree of interconnectedness among financial brokers and with third-party providers means that such events can spread widely.[119] Consequently, financial institutions and authorities monitor cybersecurity risks and threats, both in Mexico and globally, and adapt their security measures to the changing and emerging IT environment.

In this vein, the global financial sector is following the evolution and relevance of cybersecurity risks

[113] The Safety Net is a set of financial resources that the central counterparties (CCP) make up, mainly from the requirements they make to their participants, to cover credit risk and liquidity exposures.
[114] This amount corresponds to the required contributions, which may vary from the contributions deposited, since the Clearing Members may decide to deposit more than the required amount.
[115] Data as of April 30, 2025.
[116] Data as of April 30, 2025.
[117] WEF_Global_Cybersecurity_Outlook_2025.pdf (weforum.org) (p.9)
[118] Domestic Systemically Important Banks | National Banking and Securities Commission | Government | gob.mx (www.gob.mx)
[119] Promoting Global Financial Stability: 2024 FSB Annual Report (p. 8)

associated with the increasing use of AI and the digitization of finance. In an environment where companies and individuals have experienced the extensive and daily use of AI tools, in the short term (2 years) concerns about the potential adverse outcomes of these types of technologies are still at a low level. However, the risks associated with these technologies should not be underestimated, given the accelerated pace of their adoption, their potential uses, and their increasing pervasiveness.

Like other central banks (see Box 8), Banco de México has incorporated the risks derived from the use of AI into its institutional risk management, and will continue to monitor the evolution and adoption of this technology in the financial system, which began in 2024.

On the other hand, there has been an increase in computer attacks on companies that offer products and services to financial institutions. The purpose of these attacks is to steal customer access information, which can be used to commit fraud. As of the date of this *Report*, no direct effects on Mexican financial institutions or their clients have been identified as a result of this type of attack.

Additionally, in the face of geopolitical conflicts, specific monitoring of risks related to the cybersecurity of financial systems is maintained, as events that affect critical infrastructure could occur through cyberattacks, impacting either directly or indirectly financial institutions.[120] The monitoring that has been established for the last three years by Banco de México and the Mexican financial authorities regarding cyberattacks originated by the conflicts between Russia and Ukraine, as well as those originated in the Middle East, allow maintaining the alert level for the Mexican financial sector at "Yellow",[121] mainly because so far the global financial sector has not been its main target, and financial institutions in Mexico have not identified cyberattacks that could be attributable to these events. Nevertheless, Banco de México continues to monitor any possible cyber threat arising from these conflicts and encourages Mexican financial institutions to continue strengthening their protection and response schemes.

At the end of December 2024, financial institutions reported [2] cyber incidents,[122] which were attended by the Information Security Sensitive Incidents Response Group (GRI) of the Mexican financial authorities[123] according to their protocols, with no economic impact reported to the clients of such institutions. No reports of cyber incidents have been received this year.

During this period, the financial authorities, through the GRI, issued fifteen bulletins with technical cyber threat intelligence to their regulated entities. With this information, financial institutions can proactively reinforce their protection strategies and prevent attacks that have been observed in another institution, which contributes to strengthening the cybersecurity of the financial sector as a whole.

At the end of December 2024, Banco de México published and disseminated to the Mexican Financial Sector, the first edition of the Cybersecurity Threat Report on the Mexican Financial System. The Report is the result of an in-depth analysis of the threats faced by financial institutions at a global and national level, and its purpose is to alert and, if necessary, promote preventive and response actions to the risks that these types of threats represent for the sector.

In order to measure cybersecurity levels of the Mexican financial system, Banco de México monitors various cybersecurity risk indices. In particular, the Mexican Cybersecurity Attacks Risk Index[124] showed during the first half of 2025 (Graph 166) that the most frequent cyberthreat is represented by cybercrime

[120] Significant Cyber Incidents: Strategic Technologies Program: CSIS

[121] At the "Yellow" alert level, digital surveillance is maintained, focused on monitoring cyber threats and relevant events associated with military conflicts by the actors directly involved or their sympathizers. It comprehensively considers technological and operational actions to monitor the SWIFT system and other platforms used for international transactions.

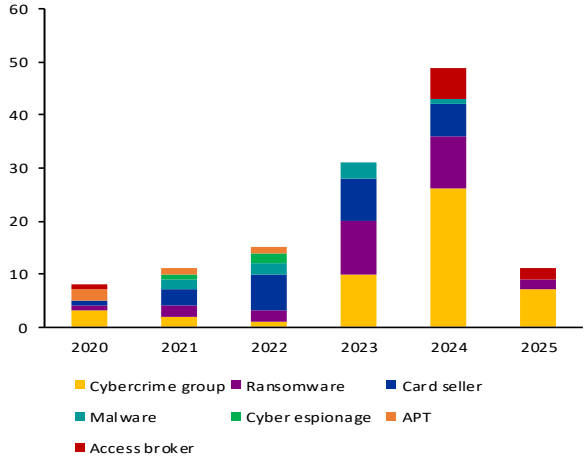
[122] Main cyber incidents that occurred in 2024 in the national financial system and that have been repurchased to Banco de México, available at: https://www.banxico.org.mx/sistema-financiero/d/%7BBAFE262B-081C-B6B5-B404-07CDD8A795D7%7D.pdf

[123] SHCP, Banco de México, CNBV, National Commission for the Pension SYSTEM (CONSAR, ITS ACRONYM in SPANISH).

[124] This indicator is based on news and publications in different specialized forums and provides an overview of the types of cyber-attacks that have been carried out against Mexican financial sector institutions during the period covered by this *Report.*

groups.[125] These groups have sophisticated their techniques, using two types of attacks, one consisting of impersonating financial institutions and authorities in order to deceive users and steal their credentials and resources; and the other consisting of directly compromising the institutions' information systems in order to extract economic resources by means of apocryphal fund transfers.

Graph 166
Mexican Cybersecurity Attacks Risk Index
News items

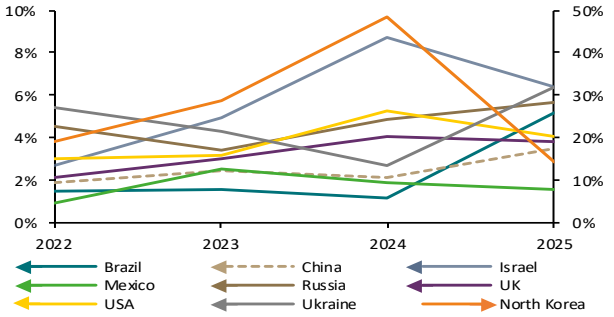


Data as of June 2025.
Source: Banco de México.

With regard to the Risk Perception Index of Cyber-attacks to the Financial System,[126] which quantifies cyber risk in the financial sector across various countries based on media sources,[127] the results indicate that between January 2022 and May 2025, Mexico attained a rating of 1.76%, ranking 74th out of 158 countries. In this index, higher percentages and higher positions in the ranking reflect a heightened perception of cybersecurity risk. Thus, Mexico's score remains below the mean of 2.79% and the median of 1.92% across all countries.

When analyzing the index on an annual basis for a sample of countries, North Korea stands out, primarily due to sanctions imposed on a virtual asset software allegedly supporting a hacker network. Russia and Ukraine are also notable, as the European Union has reinforced its defense strategies, including cybersecurity measures, in the anticipation of potential Russian cyberattacks amid the ongoing war in Ukraine. Finally, Mexico's index has shown a recent decline, but there are references to the importance of prioritizing cybersecurity in the region (Graph 167).

Graph 167
Risk Perception Index of Cyber-attacks to the Financial System
News ratio



Data as of May 2025.
Source: Banco de México with information from Refinitiv.

[125] ***Access broker****:* threat actor that illegally accesses organizations' computer networks and resells access through clandestine Internet forums. ***APT***: Advanced Persistent Threat, for its initials in English, has high levels of expertise in hacking techniques and the resources and time it requires so that, through the use of different sophisticated attack vectors, it manages to breach target organizations, in order to sabotage them, obtain sensitive information or financial gain. ***Card seller****:* Threat actors whose main activity consists of stealing information related to bank cards of financial institutions' clients, in order to sell it in clandestine Internet forums. **Cyber espionage**: threat whose purpose is to extract sensitive information from government institutions or large corporations. **Cybercrime group**: threat derived from criminal activities aimed at taking advantage of the computer systems that provide services to customers of the institutions, with the purpose of obtaining economic resources in bank accounts controlled by the attackers. This category groups together the generalized threats to which the institutions' transactionality systems are exposed and which cannot be associated with any of the other categories. ***Malware****: a* threat designed to compromise the confidentiality, integrity or availability of information in a computer system. ***Ransomware****:* a type of malicious software whose purpose is to hijack sensitive information from a computer system in order to make the victim pay a ransom for it or to prevent its publication on clandestine Internet forums.

[126] The index by country is calculated as the ratio between the number of news items related to cybersecurity risks in the financial sector and the number of news items related to general risks in this sector (cybersecurity risks, credit risk, reputational risk, environmental risks, among others), whereby the higher the level, the higher the perception of cybersecurity risks.

[127] Compared to the indicator presented until the December 2023 *Report*, calculated from news extracted through *web scraping*, this index was constructed based on a significantly larger set of news items, which was obtained from Refinitiv and contains information published by Reuters and other national and international media. This set contains news in English and Spanish, related to financial and economic topics. Therefore, since the sources of information differ, the data are not necessarily comparable between the two indicators.

The indices presented help to assess the state of cybersecurity in the Mexican financial system, and help Banco de México to identify the main cybersecurity risks of the period, as well as their evolution over time and promote financial institutions to maintain robust cybersecurity strategies to mitigate them. These actions include improving cyber threat intelligence capabilities, strengthening the continuous awareness of personnel including senior management, and conducting simulation exercises that include cyberattack scenarios, in which financial institutions put into practice their incident response capabilities. These actions, in conjunction with compliance and regulatory frameworks, enhance the protection against cybersecurity risks and strengthen the cyber resilience of the financial sector.

Box 8: The use of Artificial Intelligence in central banks: risks, benefits and opportunities

I. Introduction

This box reviews the current status of the development and implementation of Artificial Intelligence (AI) and Machine Learning (ML) tools in central banking. It identifies prominent use cases and highlights potential risks and relevant considerations for the financial sector and its authorities.

AI is a broad term that refers to computational systems performing tasks that require human-like intelligence (BIS, 2024). Globally, the evolution and adoption of AI driven products and services is spreading across various industries, including the financial sector, with the potential to impact the functioning of the system and broader economic conditions. Accordingly, financial authorities, particularly central banks, have the responsibility to closely monitor the evolution of these technologies, both in their role as supervisors, whose mandate is to promote the sound development of the financial system, and as users, with the objective of enhancing operational efficiency.

Despite the many advantages offered by these technologies, the use of AI can also introduce risks and amplify existing vulnerabilities in the financial ecosystem. It is therefore imperative to promote the adoption of AI in a safe, effective, and responsible manner (McCaul et al., 2024).

II. Potential benefits and risks from the use of AI

Central banks should identify use cases in which AI offers opportunities for improvement in order to innovate and strengthen both their operational and analytical functions. In general, these tools can generate content (articles, reports, summaries) based on specific criteria; function as programming assistants; and optimize and automate the execution of routine tasks, helping reduce costs and improve operational efficiency. They can also significantly increase the capacity to process and analyze large volumes of data and detect complex patterns across variables, which may be associated with economic and financial phenomena. This allows for greater precision and depth in analysis, complementing conventional econometric methods and other forms of quantitative analysis.

In particular, AI can enhance early-warning tools for the detection of financial stability risks by monitoring trends across various communication channels and supporting the development of real-time alert mechanisms to identify system vulnerabilities. Another important contribution is the generation of synthetic data, which can be used to expand training datasets or replace real data, thereby contributing to the protection of confidential information.[1]

However, as with past technological innovations, the adoption of AI may introduce new risks and vulnerabilities or exacerbate existing ones (*FSB*, 2024; *BIS*, 2025). Key challenges include: managing confidentiality, integrity, and availability of information generated or accessed by AI systems; and integrating these technologies into existing IT infrastructures in a way that mitigates the operational risk associated with such integration.

As with other emerging technologies, staff training is essential to the proper use of AI tools. This is particularly relevant given the opacity of certain AI models, which can make interpreting and explaining their outputs more difficult. Using these tools without adequate training or controls can result in inaccurate, erroneous, unexplained or inconsistent conclusions,[2] posing challenges to both accountability and decision-making; potentially resulting in reputational risk.

Additionally, AI models can lead to a disproportionate increase in computational and energy requirements, presenting further challenges in terms of sustainability and operational efficiency, and adding to the need for investment in information technology and communications infrastructure. The use of such tools is also exposed to cybersecurity risks, stemming

[1] For instance, the European Union's Digital Finance Platform has established a collaborative data center between financial institutions and authorities. It was built using synthetic data generated by the supervisors of each country, without the requiring participants to grant access to confidential data (European Commission, 2022).

[2] In particular, Large Language Models (*LLM*) can generate fabricated content, known as "hallucinations". Additionally, recent research suggests that, despite their apparent proficiency in solving mathematical problem, these models exhibit limitations in formal reasoning (Mirzadeh et al., 2024).

both from potential vulnerabilities in the underlying IT systems and from the increasing use of AI by cybercriminal groups to develop more sophisticated attack methods. Central banks are therefore obligated to establish and implement cybersecurity controls that mitigate these risks and guide their staff on the proper use of each AI tool.

Therefore, it is imperative to ensure that all tools and systems that integrate the use of AI operate under legal, moral and ethical principles. This helps prevent the use of applications that could have negative implications for consumer protection, hinder accountability, or negatively affect the performance of markets and institutions, and, potentially result in risks to financial stability.[3] These principles, desirable in an AI system, form the foundation of the concept of *Responsible AI*.[4,5]

The Bank for International Settlements (*BIS*) underscores the importance of implementing a comprehensive risk management and governance framework for the use of AI (BIS, 2025). Such a framework should: define the central bank's AI risk profile; establish a process to identify, evaluate and select viable projects; leverage and adapt existing management models; protect information throughout the AI lifecycle; and monitor AI use and outcomes.

In this context, Banco de México, aware of the risks posed by AI, has since 2024 incorporated in its cybersecurity strategy and institutional risk management framework the following elements: (i) monitoring the evolution and adoption of this technology within the financial system; (ii) responding to incidents related to AI use; and (iii) executing strategic actions to promote the responsible, orderly, safe, and consistent development of AI-related technologies within the Institution.

III. Impact of AI in Central Banking and Primary Use Cases

For central banks, the adoption of AI has a direct impact from two perspectives: (i) in fulfilling their mandate to supervise and preserve financial and price stability; and (ii) in their role as users, through the adoption of new AI tools to expand data availability and analytical resources, and to optimize operational efficiency.

According to *BIS* (2025), AI applications in central banking fall into eight main categories: (i) economic analysis, forecasting and policy analysis, (ii) payment systems, (iii) regulation, (iv) supervision and oversight, (v) banknote issuance and distribution, (vi) anomaly detection, (vii) risk assessment, and (viii) customer and institutional service.

Figure 1 illustrates a trend of central banks to rely increasingly on in-house developed models (rather than solutions distributed by third parties) focused on the use of ML and *Deep Learning*. Internal development allows for greater control over model architecture and over the management of data quality, confidentiality, integrity, and availability, features that may be compromised in models developed by third parties.

Some projects rely exclusively on deep neural networks that can be trained from scratch or adapted to specific tasks using fine-tuning techniques or transfer learning, broadening their applicability in complex financial contexts. By contrast, central banks are only beginning to adopt commercial and open-access models, such as Large Language Models (LLM) and Generative AI,[6] with most initiatives still in early development or pilot stages.[7]

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[3] The term "*Value alignment*" refers to the degree to which an AI system is "aligned not only with neutral human preferences (such as the intent to perform tasks), but also with moral and ethical considerations" (US CFTC, 2024).

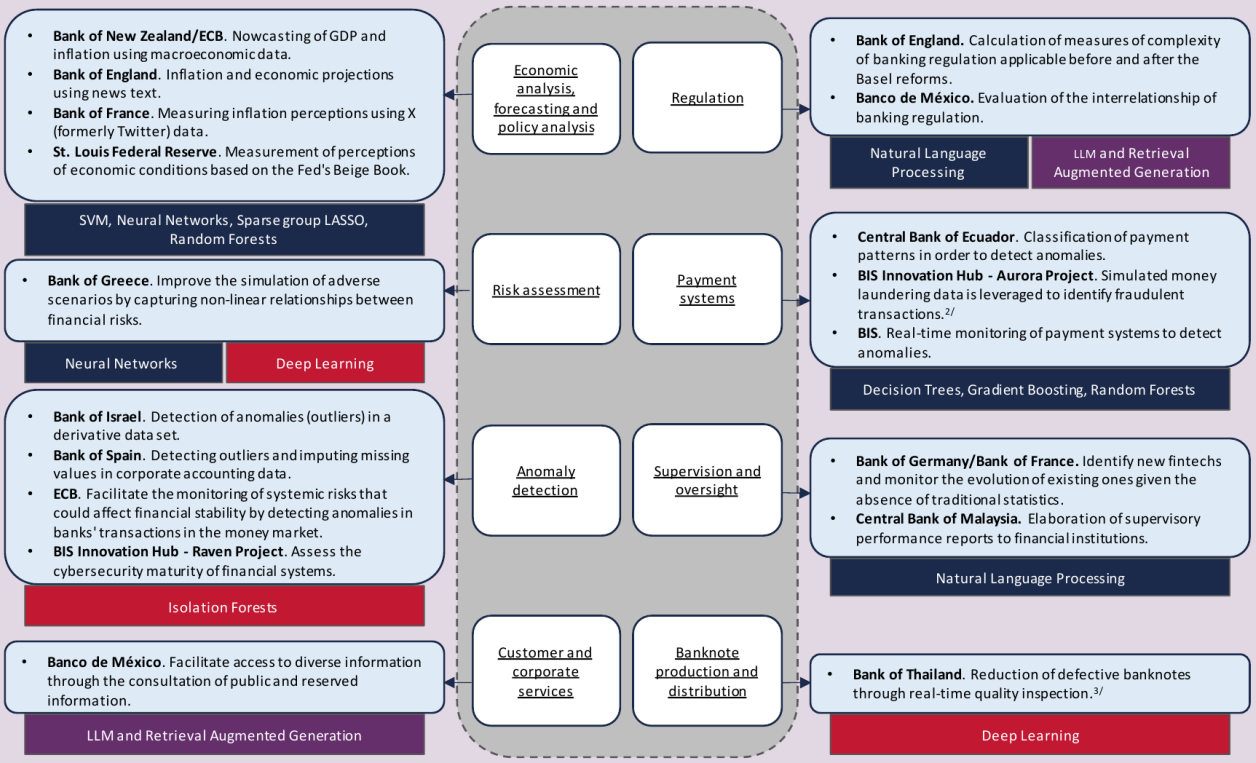
[4] *Responsible Artificial Intelligence* (*Responsible AI*) refers to the set of principles aimed at generating trust in AI tools and systems by considering their social impact, in order to align them with institutional values, as well as legal and ethical standards. This concept is also referred to as "*Trustworthy AI*" or "*Ethical AI*" (US CFTC, 2024).

[5] For instance, the Bank of England's Data Office identifies specific dimensions that must be fulfilled for AI models to be considered reliable and suitable for supporting the work of the central bank. These dimensions are grouped under the acronym *TRUSTED* (Benford, 2024): the system must be *Targeted*, *Reliable*, *Understood*, *Secured*, *Stress-Tested*, *Ethical*, and *Durable*.

[6] Generative AI models are those capable of producing original content based on user-provided instructions. The generated output can take the form of text, audio, image, video or code (BIS, 2025).

[7] For example, in 2024 the BIS launched the GAIA project, which uses an LLM to extract climate-related indicators from publicly available corporate reports. In 2025, it announced the *Spectrum* project, aimed at automatically categorize billions of product descriptions and price

Figure 1
AI Use Cases in Central Banking[1/]



Source: Financial authorities' websites.
1/ The machine learning models and methodologies marked in blue correspond to supervised learning techniques, those marked in red correspond to unsupervised learning techniques, while those marked in purple integrate supervised, unsupervised and reinforcement learning techniques.
2/ To see the latest progress on this project as well as a proof of concept, please visit: https://www.bis.org/about/bisih/topics/fmis/aurora.htm
3/ Details on the defects that can be identified and the results of the precision tests are available at: https://www.bis.org/ifc/publ/ifcb57_34.pdf

IV. Considerations regarding the use of new Generative AI models

New developments and applications of Generative AI in the financial sector have recently gained traction. One notable example is the emergence of AI agents, which are tools that operate independently and are capable of perceiving, acting and learning without constant human guidance. An AI agent could, for example, autonomously monitor market trends and forecast future developments to mitigate risks in real time, issue personalized financial recommendations based on user behavior, or improve the responsiveness of automated trading systems. Collaboration among multiple AI agents can result in more adaptive decision-making, improving risk management and efficiency in execution strategies. However, the capabilities remain under development and their use may introduce new risks. For example, agents may engage in insider trading as part of their internal reasoning processes (Scheurer et al., 2024), or a group of agents may exhibit collusive behavior aimed at profit maximization, without any agreement or interaction that may violate traditional antitrust regulations (Wei Dou et al., 2024). Moreover, a recent study has shown that some AI agents, based on widely used *LLM*, are unable to recognize their own errors and correct them when executing real-world tasks (Perez-Cruz and Shin, 2025).

On the one hand, the integration of LLM into market analysis tools enables real-time interpretation of economic signals, supporting faster decision making. According to the International Monetary Fund (IMF),

observations using a Generative AI model, in order to improve inflation forecasting. Recently, the Bundesbank introduced the MILA project, also based on Generative AI, which seeks to classify the narrative of European Central Bank (ECB) press conferences according to the implied monetary stance (restrictive, neutral or expansionary).

there is evidence of faster market reaction around the release of the U.S. Federal Reserve minutes since the introduction of Transformer-based models (IMF, 2024).[8] However, this real-time responsiveness may also increase volatility and trigger sharp market adjustments, potentially resulting in fatter-tailed risk distributions and a higher level of systemic risk.

Finally, persuasive AI tools, designed to influence users' decision-making through tailored messaging, could enhance service personalization, making banks' operations more efficient, for example, via marketing campaigns with customized recommendations. However, such tools also carry the risk of guiding users towards decisions that are not necessarily aligned with their needs. A recent study found that in a set of *LLM* examined, most of them systematically employed harmful or unethical persuasion strategies,[9] even in an ethically neutral context, leading to lower rejection rate (Liu et al., 2025).[10]

Therefore, despite the new opportunities offered by these AI tools, these developments underscore the importance of continuously assessing their implications, and identifying and mitigating the associated risks.

V. Final considerations

The development and adoption of AI across industries is advancing at an increasingly rapid pace. Central banks are incorporating these tools to process large volumes of information, integrate new variables into traditional analyses, expand analytical capabilities, and complement risk detection systems, ultimately enabling them to fulfill their mandates in a more robust and efficient manner. At the same time, the financial sector can leverage the benefits of AI to improve the provision of its services and reach previously underserved segments of the population.

However, the adoption of these technologies requires managing the risks associated with their use and introduces new challenges in areas such as governance, regulation, supervision, cybersecurity controls, qualified staff and ethical data management. It is therefore essential for central banks to anticipate the potential effects that such tools could have on their operations, as well as on the broader economy and financial system, seeking a balance between the benefits of innovation, the protection of users' rights, and the preservation of the financial stability. For example, the European Union published the AI Act in 2024, aimed at safeguarding human rights, including the classification of AI applications by risk level. In New Zealand, new requirements for deposit-taking entities are expected to be introduced in the coming years to mitigate the risks associated with the use of AI tools (Harkin, 2025). Conversely, the Financial Policy Committee of the Bank of England (BoE) has stated that AI adoption entails both benefits and risks for the financial sector and therefore recommends that such adoption be carried out in a safe and responsible manner (BoE, 2025).

In light of this, it is advisable to foster cooperation among central banks to develop regulatory, governance and risk management frameworks, along with standards that promote best practices, while also sharing knowledge, experiences and data (*BIS*, 2025; *BIS*, 2024; *FSB*, 2024). This collaborative approach will enable institutions to harness benefits of AI while identifying and mitigating potential risks and ensuring long-term financial stability.

Finally, the convergence of AI with other innovations, such as virtual assets, decentralized finance, and institutions that make use of technology to provide financial services[11] could amplify both opportunities and risks for the financial system and its users. Indeed, the integration of these technologies may create new channels of risk transmission, underscoring the need for continuous and effective supervision to identify risks and vulnerabilities in a

[8] The Transformer architecture is an ML model that introduces two key features: "multi-head attention" and "positional encoding". In principle, "attention" is a mechanism that enables each word in a text to be interpreted in the context of all others. "Multi-head attention" extends this mechanism by using parallel neural networks to capture multiple meanings for the same word. In contrast, positional encoding allows the model to process data in parallel while retaining word order information, making it possible to train larger and more efficient models (BIS, 2024; Vaswani et al., 2017).

[9] Emotional manipulation, coercive control, deception, and exploitation of vulnerabilities are examples of ethically harmful persuasion strategies.

[10] The article defines an ethically neutral persuasion scenario as one that does not carry ethical or moral implications.

[11] 68% of entities in this sector use AI, although most do so through an external provider (Finnovista, 2025).

timely manner, and to implement appropriate prevention and corrective measures.

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V. Stress Tests and Recovery Plans

V.1. Credit Stress Tests

Stress tests are exercises carried out by the Bank of Mexico to promote the sound development of the financial system. The exercises simulate severe, yet plausible, macroeconomic and financial shocks that could affect commercial banks' solvency or their ability as a financial intermediary, in order to test their capital adequacy.

This exercise evaluated the impact of three distinct macroeconomic scenarios, as well as three historical scenarios that replicate the trajectories of key macro-financial variables during past periods of high volatility and stress, with the aim of observing what would happen if a similar event were to occur.

Results show that the financial system is resilient to shocks across the different scenarios. Both solvency, as measured through the CAR, and the leverage ratio remained above the regulatory minimums throughout the stress horizon.

Although the scenarios are built with certain macro-financial risks in mind, risks discussed in this Report should not be assigned a probability of materialization or interpreted as a prediction of future economic events. Rather, the exercise seeks to identify and analyze the system's vulnerabilities, functioning as a simulation of a counterfactual and partial equilibrium model.

Scenario A: Weakening of domestic consumption and investment

This scenario corresponds to a prolonged and acute weakening of domestic consumption and investment, which would have an adverse effect on the employment rate, household income levels, and companies' economic prospects. This lower level of output and income growth is the main factor that would impact banks' balance sheets.

Scenario B: Slowdown in Global Economic Activity

This scenario simulates the materialization of a significant slowdown in advanced economies, particularly that of the United States, such that its economy would enter a recession. The deceleration in the United States' imports and industrial activity would affect Mexico's economic growth, causing high volatility in financial markets and the exchange rate. The economic slowdown would be reflected in lower demand for credit, a higher unemployment rate, and an increase in the non-performing loan ratio of the loan portfolio.

Scenario C: Adjustment in credit rating

This scenario pertains to a possible loss in the sovereign credit rating, as well as a loss in Pemex's rating, due to credit agencies having a worsened outlook. Increased volatility in domestic financial markets, a depreciation of the exchange rate, and higher risk premiums create upward pressures on interest rates. Hence, this will set forth a contraction in aggregate demand, causing a decrease in the employment rate and production. This environment limits credit growth, and a higher non-performing

loan ratio is to be expected, both of which will have repercussions on banks' ability to generate income.

Historical scenarios

Three relatively recent historic scenarios, of high stress and volatility, were considered. They replicate the trajectories of key macro-financial variables: the 1995 economic crisis (H1), the 2008 global financial crisis (H2), and the economic crisis caused by COVID-19 (H3).

Methodological framework

This exercise uses the same methodology as past editions of the Report. Scenarios are generated using a vector autoregression model (VAR) with a 36-month horizon. Simulations are created around central trajectories, which represent the movements of key macro-financial variables which correspond to a given scenario's narrative. This model generates random shocks that affect the trajectories of those variables while maintaining internal consistency.

The possible market losses of each banking institution are generated from a given scenario. Market losses take into account contagion effects, which could propagate and exacerbate shocks through the banking network.

Using an econometric model, the impact of macro-financial shocks on the composition of banks' reserves, loan default probabilities, and the dynamics of their credit portfolios are measured.

Furthermore, the exercise considers differentiated impacts based on the composition of banks' portfolios across economic sectors. The differences are driven by the growth of each economic sector and the credit performance of their private non-financial institutions.

Additionally, a simulation process is used to model low-probability, high-severity events, enabling the measurement of the impact of defaults by the largest debtors in the system.

Lastly, the effects on operations and solvency are calculated. To achieve this, financial margins are derived from the elasticity of asset and liability interest rates relative to the Federal Treasury Certificate rate. Non-financial margins and administrative costs are also calculated; both constitute a constant proportion of the total credit portfolio of a given bank and thus will change by the same ratio. Having obtained the operating results, market, contagion, and credit losses, the capacity of banks to absorb shocks and the evolution of the system's net capital in a given scenario are identified.

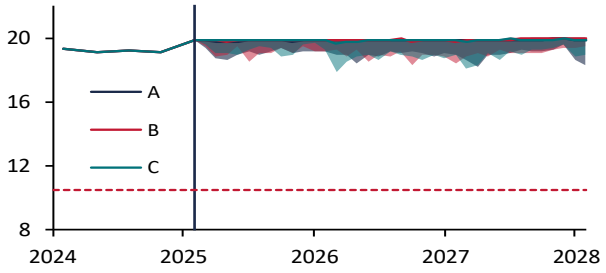
Nevertheless, the model might underestimate complementary effects between different scenarios that, when combined, could amplify negative shocks, feedback loops between the financial and real sectors, or unexpected non-linear effects.

One of the assumptions of the exercise is that the reactions of banks and regulators are not considered. In other words, throughout the stress horizon, banks are unable to change their business strategy, make equity contributions, or adjust the proportion of their portfolio assigned to repo and derivative transactions. Regulators are also constrained and unable to take actions that could mitigate the magnitude of shocks. Therefore, the exercise functions as a counterfactual and partial equilibrium model.

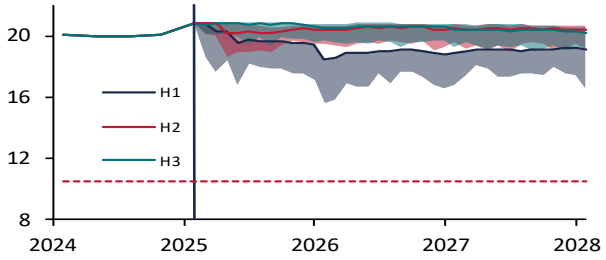
Main results

In the simulated scenarios, the system ends up with capitalization levels above the regulatory minimum at the end of the evaluated time horizon (Graph 168a). When considering the historical scenarios, the capitalization levels observed are lower, but still above the regulatory minimum (Graph 168b). However, in the short term, reductions in net capital levels (Graph 169a) and risk-weighted assets (Graph 170a) are observed. This is consistent with a deleveraging process in the face of the severity of the scenarios, and is also more pronounced in the historical scenarios (Graph 169b and Graph 170b).

Graph 168
System's Capital Adequacy Ratio (CAR)
a) Scenarios A, B and C
Percent

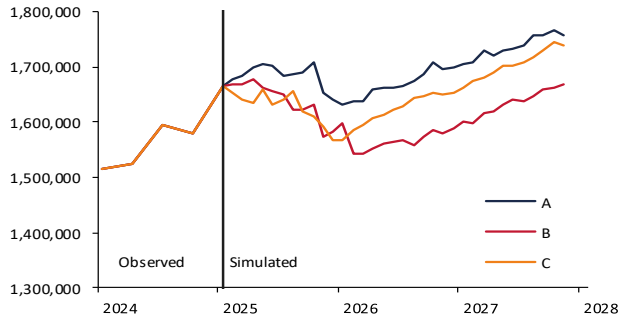


b) Historical Scenarios
Percent

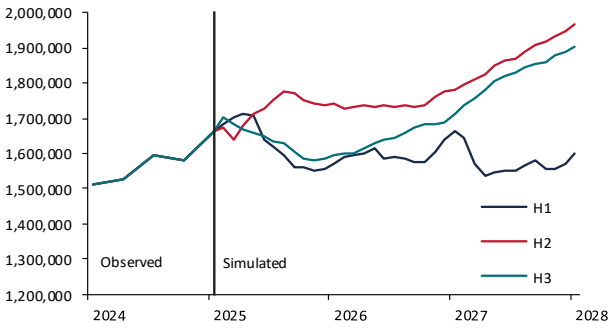


Data as of March 2025 and simulations 3 years thereafter.
Source: Banco de México.

Graph 169
Evolution of the average net capital of the system
a) Scenarios A, B and C
Million pesos

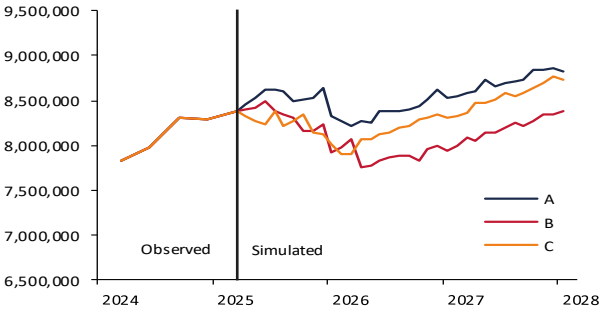


b) Historical Scenarios
Million pesos

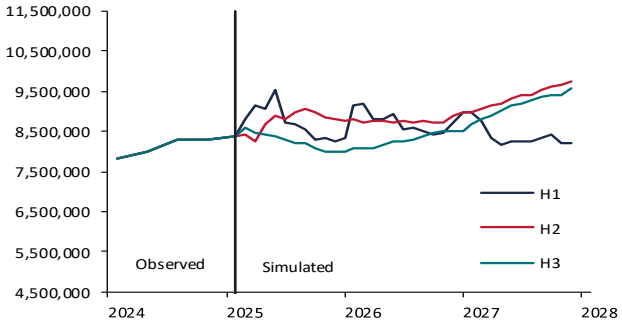


Data as of March 2025 and simulations 3 years thereafter.
Source: Banco de México.

Graph 170
Evolution of the system's average risk-weighted assets
a) Scenarios A, B and C
Million pesos



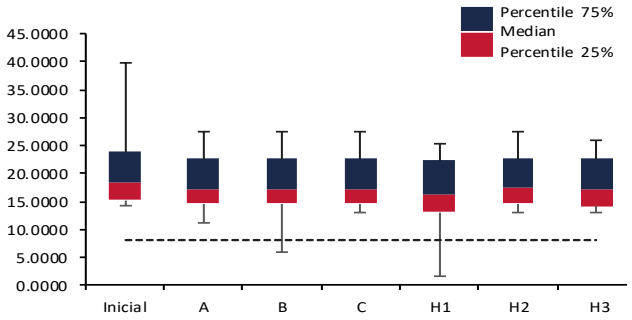
b) Historical Scenarios
Million pesos



Data as of March 2025 and simulations 3 years thereafter.
Source: Banco de México.

Although the system as a whole maintains capitalization levels above the regulatory minimums, in some of the simulated scenarios, some banks, which represent a relatively low proportion of the system's assets, could experience a greater degree of impact on their capitalization levels (Graph 171).

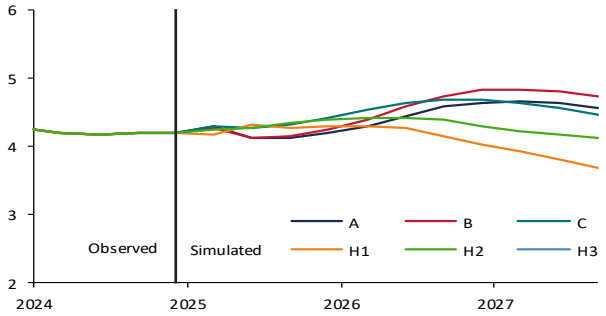
Graph 171
Distribution of the average CAR at bank level at the end of the test[1/]
Pecent



Data as of March 2025 and simulations 3 years thereafter.
Source: Banco de México.
1/ The dotted horizontal line corresponds t o the minimum ICAP without considering capital supplements. In the box and arms diagram, the arms represent 10 and 90% of the distribution.

The average probabilities of default are a useful indicator of the impact of scenarios on the delinquency levels of the system's credit portfolio. As shown in (Graph 172), delinquency remained low at the beginning of the exercise, despite the shocks.

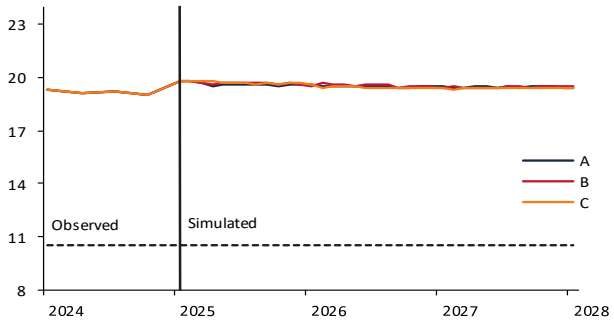
Graph 172
Average probabilities of default of the system's credit portfolio
Weighted by the current portfolio of each bank, percent



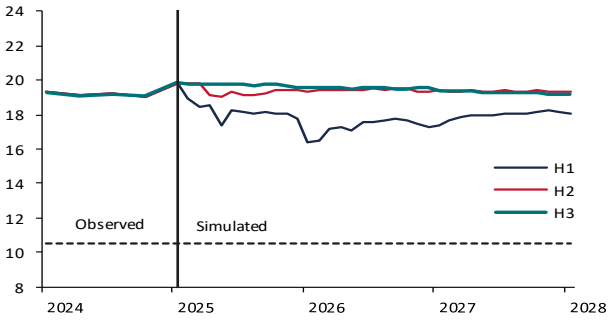
Data as of March 2025 and simulations 3 years thereafter.
Source: Banco de México.

A common characteristic of the system's credit portfolio is its high concentration, where a small portion of debtors account for a large percentage of the total credit granted. To measure the effects that this high concentration might have on the system's resilience, an exercise was conducted to simulate the default of these large debtors (Graph 173a and Graph 173b). The capital levels in this exercise are lower; nevertheless, the system remains above regulatory minimums.

Graph 173
Average CAR of the system considering an impact per concentration corresponding to 99% of the losses 1/
a) Scenarios A, B and C
Percent



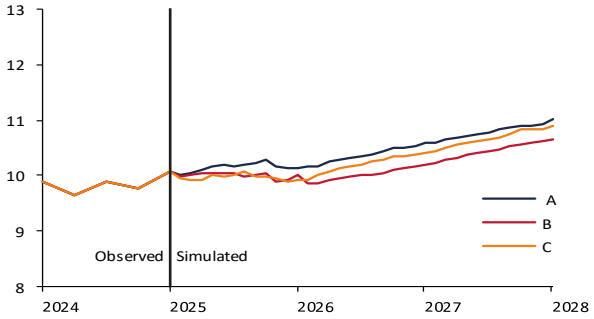
b) Historical Scenarios
Percent



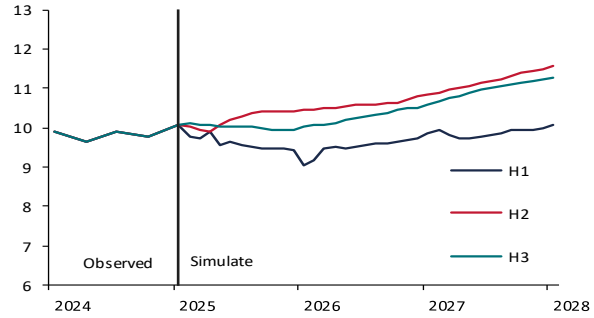
Data as of March 2025 and simulations 3 years thereafter.
Source: Banco de México.
1/ The horizontal line corresponds to the minimum CAR plus capital supplements.

This exercise also evaluates the impact of the different scenarios on banks' leverage ratios. The system's average leverage levels remain above the regulatory minimum of 3% (Graph 174a and Graph 174b); however, some individual institutions, which represent a small portion of the system's total assets, show lower levels. It is important to note that there is a high correlation between leverage and capital levels: those institutions with a low leverage ratio also showed a lower capital adequacy ratio (Graph 175).

Graph 174
Average leverage ratio of the system
a) Scenarios A, B and C
Percent



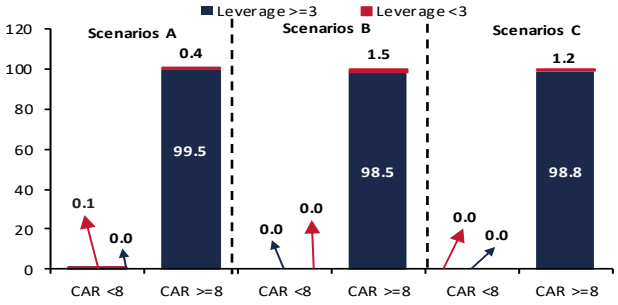
b) Historical Scenarios
Percent



Data as of March 2025 and simulations 3 years thereafter.

Source: Banco de México.

Graph 175
Distribution of the average CAR at bank level at the end of the test
Percent of System Assets



Data as of March 2025 and simulations 3 years thereafter.

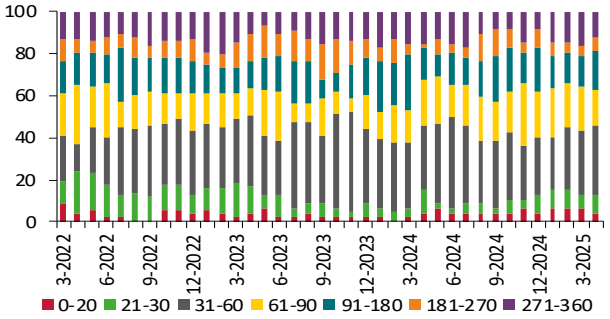
Source: Banco de México.

V.2. Liquidity stress tests

According to the liquidity stress tests, the liquidity position of banks would allow them to face stress episodes more severe than those experienced in the past and those considered by international liquidity standards. Nevertheless, some medium and small banks would fail to meet the regulatory liquidity requirements or would have their liquidity position pressured in some of the particularly severe scenarios assessed with the liquidity stress tests.

The liabilities coverage horizon,[128] with data as of April 2025, indicates that most banks would be able to meet their liabilities for a period of at least 30 days using only their stock of liquid assets (Graph 176); that is, without taking into account their inflows.

Graph 176
Percentage of banks that could meet their liabilities under the liabilities coverage stress scenario 1/
Vertical axis: percentage of banks
Horizontal axis: date of the calculation
Color: days that banks could cover their obligations



Data as of April 30, 2025.

Source: Banco de México.

1/ For each month, banks are aggregated by range of days, according to their monthly average calculated with daily observations, of the number of days that they could cover their liabilities in a severe stress scenario. See Box 9 "Stress testing methodologies based on cash flows" of the Financial Stability Report, December 2022.

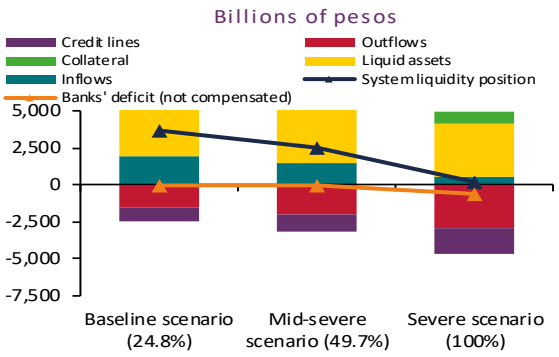
Cash flow stress tests for a 90-day horizon, with data as of April 2025, indicate that the stressed value of both liquid assets and inflows for banks as a whole would be higher than the modeled stressed outflows. In other words, banks would maintain a liquidity surplus under a severe stress scenario, although some individual institutions would face a liquidity

[128] The liabilities coverage horizon evaluates funding risk under a more severe scenario than the LCR, as it does not consider the inflow of contractual cash flows normally available to banks to meet their obligations.

deficit under such severe stress scenarios (Graph 177).[129]

Graph 177

Liquidity stress scenarios over 90-day period 1/



Data as of April 30, 2025.

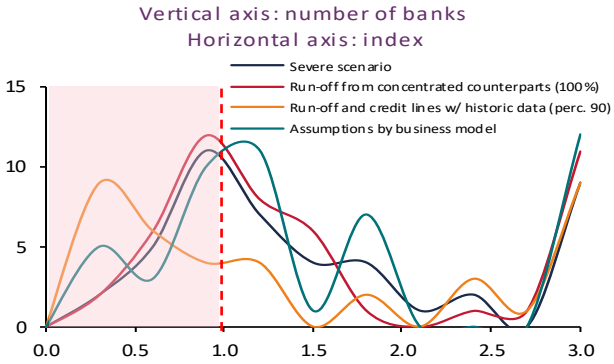
Source: Banco de México.

1/ In the severe scenario (100% severity), a haircut on liquid assets of around 4% is considered. Repos have a roll-over of 45% and released collateral has the same haircut as liquid assets. Inflows from loans portfolio are not considered (100% haircut). Wholesale deposits (demand and term) have a 20% run-off factor and retail deposits (demand and term) have a 10% run-off factor. Contingent outflows and granted credit lines have a 40% run-off factor. The baseline scenario and mid-severe scenario consider a 24.8% and 49.7% severity compared to the severe (100%) scenario. The mid-severe scenario estimates an aggregate outflow which is similar in magnitude to the outflow calculated under the LCR (See Box 9 "Stress testing methodologies based on cash flows" of the Financial Stability Report, December 2022).

Additionally, several stress exercises were performed, based on the cash flow framework and measuring the sensitivity of the LCR. In both cases, different assumptions were used, associated with the potential vulnerabilities identified in some institutions, in particular: funding concentration, credit lines granted and intraday liquidity. Most banks, as well as the system, have sufficient liquidity to face these scenarios. However, individually, some institutions would not have sufficient liquidity to maintain a LCR above 100%. Nonetheless, liquid assets are constituted precisely to meet liquidity needs in stress situations (Graph 178).

Graph 178

Distance to Liquidity Stress Indicator under different scenarios



Data as of April 30, 2025.

Source: Banco de México.

1/ The DLSI refers to the sufficient severity for the institution to present a liquidity deficit. The severe scenario is normalized to 1, values above indicate greater resilience than the assesed scenario. In the severe scenario it corresponds to the scenario calibrated to stress the entire bank (See Box 9 "Stress testing methodologies based on cash flows" of the Financial Stability Report, December 2022). The scenarios adjusted with historical data (historical outflows and credit lines) consider data since 2017 by bank to calculate the 90th percentile of financial, wholesale and retail outflows, or exercise of credit lines. In the event that the 90th percentile is lower than the base scenario (24.8% of the severe scenario), the assumptions of the base scenario are used. The concentration scenarios (100% outflow rate) consider that in addition to the severe scenario outflows, the 10 main counterparties withdraw their deposits. The scenario by business model considers differentiated cash inflows and outflows assumptions for: large banks, commercial banks, consumer banking, foreign exchange banks, investment banking and others.

As a complementary exercise, to assess the sensitivity to concentration, a LCR was calculated assuming the outflow of the ten largest depositors according to historical outflows. Additionally, to assess the potential impact of intraday liquidity risk, a LCR adjusted for "maximum intraday net liquidity usage" was calculated based on last year's observations for each bank. This metric is part of the monitoring toolkit for intraday liquidity management established by the Basel Committee on Banking Supervision (BCBS)[130] and allows incorporating in the analysis the different timing of inflows and outflows throughout the day. The results of these exercises indicate that the current liquidity of banks would allow them to withstand the scenarios proposed and that most

[129] The cash flow stress tests use 21 scenarios of increasing severity; scenario number 21 is the most severe. For a detailed description of the methodology used, see Box 9. Methodology of the liquidity tests based on contractual flows from the Financial Stability *Report* December 2022.

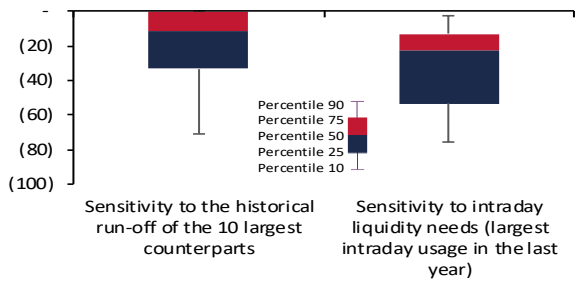
[130] Basel Committee on Banking Supervision (2019): "*SRP50 - Liquidity monitoring metrics*", December 2019.

banks have sufficient liquid assets, although, depending on the scenario evaluated, certain vulnerabilities are identified or emphasized in some institutions (Graph 179).

Graph 179

Sensitivity (what-if analysis) of the LCR under different assumptions of concentration and intraday liquidity needs 1/

Percentage, change from the regulatory scenario



Data as of April 30, 2025.

Source: Banco de México.

1/ The graph presents the percentage difference from the regulatory scenario. In the case of the concentration analysis, the historical output (90th percentile) of the 10 counterparties with the highest concentration is assumed. In the intraday liquidity analysis, the largest gap between payments sent and received accumulated on the intraday, observed over a 1-year horizon, is subtracted from the liquid assets.

V.3. Stress testing of physical risks associated with climate change

The exercise evaluates the impact of extreme hydrometeorological events on the banking system. It follows an approach similar to that of historical scenarios, assuming that extreme hydro-meteorological events are repeated and occur simultaneously. The impact on banks is observed through two channels: certain borrowers will default on their obligations due to the shock and a slowdown in economic activity will be generated. The impacts of a 1% and 2% drop in output are evaluated, scenarios C1 and C2, respectively. The methodology used is the one described in previous editions of the *Report*.[131]

Main results

The results are compared to the levels of a baseline scenario in which the trajectories have no adverse shocks since climate events are independent of macro-financial events and the severity of losses is lower. The losses can be interpreted as additional to those in other scenarios, occurring in the event of simultaneous macro-financial and climate shocks.

The first scenario shows a difference in the decline in CAR, by the end of the stress horizon, of 0.70 percentage points with respect to the base scenario, while in the second scenario the difference is of 0.54 percentage points (Graph 180). It is important to highlight that, in both scenarios, there is heterogeneity in the impacts of the shock across intermediaries; and therefore, some institutions might end the exercise with a lower capitalization level. However, at the system level, the regulatory minimums are met (Graph 180).

Graph 180

Capital adequacy ratio of the system with respect to the base scenario

Percentage points



Data as of March 2025 and simulated figures up to the stress horizon.

Source: Banco de México.

The results suggest that extreme hydro-meteorological events would have an impact on the capitalization levels of the Mexican banking system, without posing a risk to its solvency. However, the impacts are heterogeneous, as some institutions with a concentration of credit in regions or sectors susceptible to weather events may experience a greater capital loss.

[131] See Section VI.3. Stress tests of physical risks associated with the climate change, published in the *Financial Stability Report* of June 2022.

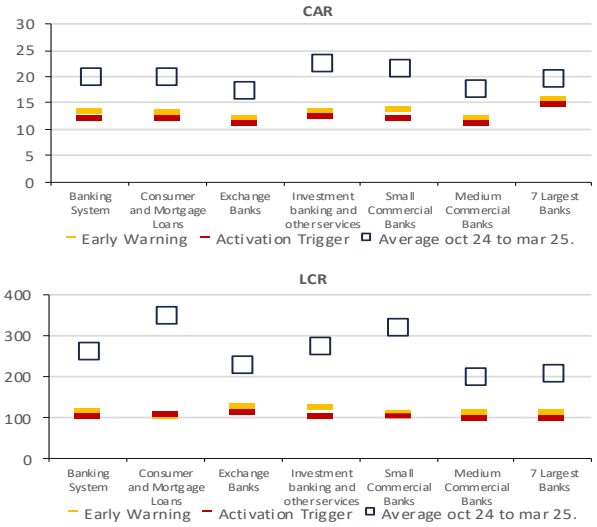
V.4. Recovery plans

The recovery plans of the commercial banking institutions, prepared in accordance to the requirements established by Annex 69 of the CUB, which came into force in January 2023, show some progress in the compliance of the provisions, although they also show some setbacks with respect to previous compliance evaluation exercises.

The main areas of opportunity to strengthen the institutions' recovery plan are, in order: the requirements related to stress tests, recovery actions and the communication plan. As such, commercial banking institutions should design stress tests to be sufficiently severe to trigger the activation of the Plan which, in turn, will help assess the relevance of the recovery actions to restore the financial soundness of banking institutions; enhance the analysis required for recovery actions;[132] and improve the communication strategy to be implemented during a stress situation.[133]

During the period between October 2024 and March 2025, banks presented levels of CAR and LCR above the triggers established in the recovery plans of the different groups of banks (Graph 181). However, some banks presented observations below their triggers, but did not implement the recovery plan. Although activation of the plans should not necessarily be automatic, and may depend on each situation, it is important that the institutions make use of the information and content of the plans to face stress scenarios, avoiding the plans from becoming a mere regulatory compliance exercise.

Graph 181
Activation thresholds and observed data of CAR and LCR 1/
Percentage



Data of CAR and LCR from October 2024 to March 2025.
Source: Banco de México and CNBV.
1/ The graph shows capped averages of thresholds and CAR by type of institution. Due to scale issues, the LCR is capped to 350 and the CAR is capped to 25. The thresholds presented are considered from the most recent version of the recovery plan.

Regarding the effectiveness of the measures proposed in the plans, the solvency and liquidity recovery margin is reasonable, provided that: i) the institutions correctly execute the measures within the expected timeframe; ii) the potential impact of the recovery actions has the scope foreseen in the plans; and iii) other shocks do not occur (Graph 182).

[132] In particular, they should estimate the time in which the recovery actions will have an effect on the solvency situation; the measurement of the expected impact that recovery actions would have on, at least, the solvency and liquidity indicators; and the possible incompatibility that may exist between their recovery actions.

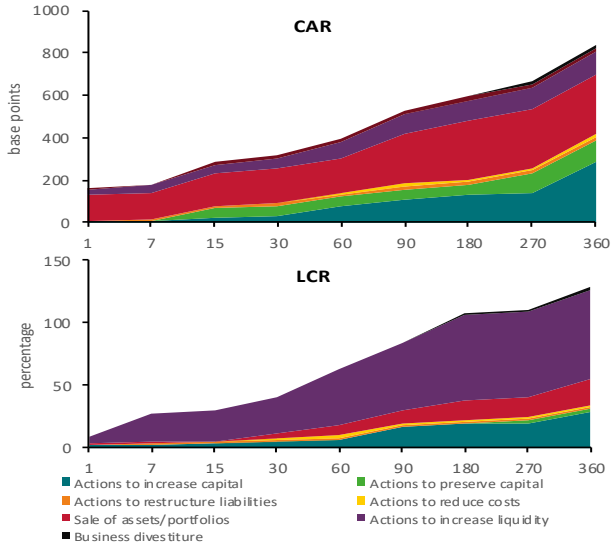
[133] Particularly in the way of determining whether it is necessary to issue a public message, as well as in the communication strategy implemented within the institution.

Graph 182

Recovery Capacity of CAR and LCR [1/]

Vertical axis: Base points for CAR and percentage for LCR

Horizontal axis: days



Data of Recovery Plans submitted between 2023 and 2025.
Source: Banco de México.
1/ The expected impact of recovery actions on regulatory indicators is aggregated weighted by total assets.

Final remarks

The Mexican financial system has shown resilience in a global context characterized by a slowdown in economic activity, ongoing disinflation, trade tensions between the United States and its trading partners, and expectations of a less restrictive monetary policy in most countries. The robustness of financial institutions, particularly commercial banks, is reflected in high levels of capitalization and liquidity, above regulatory minimums. The stress tests show that the banking system overall has adequate capital and liquidity levels to face the simulated adverse scenarios.

However, both international and domestic risks persist and require continued vigilance. Among the main macro-financial risks are: i) a marked weakening of economic activity, at both the global and domestic levels; ii) increased potential for surprises in the trajectory of global financial conditions; iii) unanticipated adjustments in the credit ratings of key domestic issuers; and iv) the materialization of a systemic event with implications for the global financial system.

The quantitative analysis of various aggregate risk indicators shows that the Financial Conditions Index (*ICF,* for its acronym in Spanish) eased, although it remains in the restrictive zone. The Financial Markets Stress Index (*IEMF,* for its acronym in Spanish) declined since the last *Report*, but remained at elevated levels. On the one hand, the aggregate risk of the financial system increased slightly, and the macro-financial vulnerabilities index, which includes early warning indicators in four sectors (financial, real, external and public), indicates that the values of these indicators remain below threshold levels across all four sectors, indicating that no substantial vulnerabilities are currently identified with this methodology.

During the first half of 2025, the Mexican financial system continued to show resilience, in a context of global economic and financial conditions subject to relevant risks. The financial position of households improved, driven by an increase in mandatory savings and stable real debt balances. Consumer financing grew in all segments, with an outstanding performance in auto loans. However, there was a slight decrease in the non-performing loan (NPL) ratio in the consumer portfolio of commercial banks and their affiliated non-bank financial institutions (*SOFOMs*, for their acronym in Spanish). In contrast, the NPL ratio of non-bank financial intermediaries overall increased slightly. On the other hand, total housing financing registered moderate growth, accompanied by a rise in NPL ratios for some lenders. Despite this, NPLs in commercial banks remained at historically low levels.

Financing to the corporate sector continued its positive trajectory, driven by growth in key internal sources and a widespread decrease in NPL ratios. Although some listed companies present indicators that suggest financial vulnerabilities, commercial banks' exposure to these companies remains low in relation to their regulatory capital. At the aggregate level, market risks within the commercial banking system increased slightly, while liquidity and contagion risks remained limited. Additionally, financial intermediaries continue to face challenges related to the management of climate change and cyberattack risks. In particular, it would be advisable to advance in the integration of physical and transition risks in their credit analysis, as well as to

strengthen their cyberintelligence capabilities, and to carry out cyber-attack simulations to test their response capabilities. For non-bank financial intermediaries, while some improvements have been observed, there is still a need to further reduce the NPL ratios in their loan portfolios.

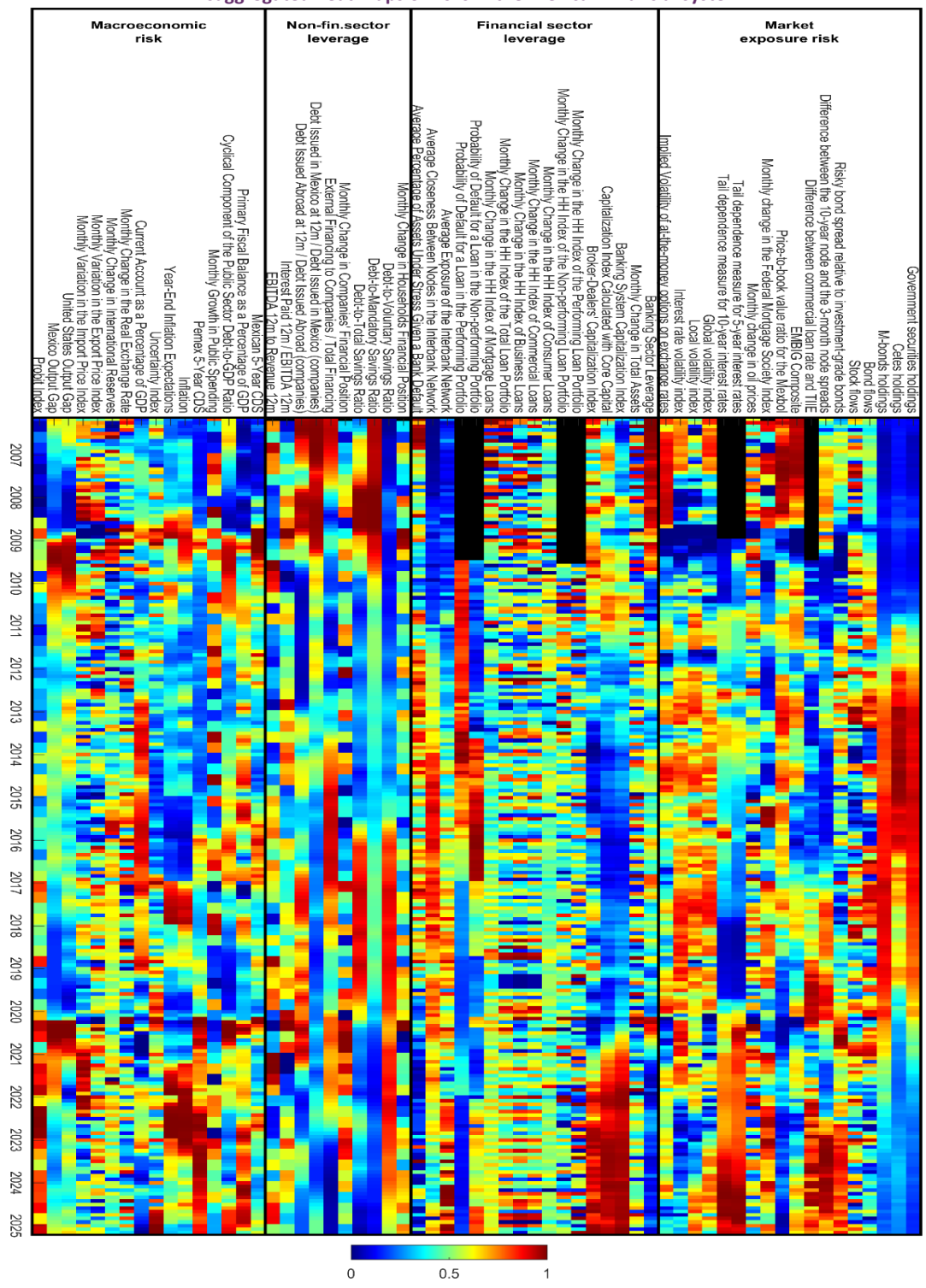
During the first half of 2025, the financial authorities undertook actions to strengthen the regulatory framework by incorporating best practices and international standards in order to keep it robust and up to date. In this context, regulatory amendments were implemented in the areas such as credit risk, accounting standards, securities lending operations, derivatives markets and sustainable finance.

In conclusion, although the Mexican financial system remains stable and resilient, it continues to face challenges in a global environment marked by uncertainty and constant change. The evidence presented confirms the importance of continuing to strengthen the institutional mechanisms that contribute to the proper functioning of the financial system and to maintain the capacity to respond to the possible materialization of new risks. The timely identification of risks and vulnerabilities—along with their early mitigation—is essential to safeguard financial stability, as it contributes to generating macro-financial conditions conducive to the country's sustainable economic growth.

Banco de México remains attentive and vigilant to the evolution of the country's financial markets and, if necessary, will take measures in coordination with other authorities and within the scope of its legal mandate to preserve the stability of the financial system and the proper functioning of the payment systems.

Annex

Disaggregated heat maps of risks in the Mexican financial system



Data as of March 2025.
Source: Banco de México.

List of initials and acronyms

BACC	Banks classified as Associated with Commercial Chains
Bancomext	National Foreign Trade Bank
Banobras	National Public Works and Services Bank
BID	Inter-American Development Bank
BIS	Bank for International Settlements
BISL	Local Systemically Relevant Banks
BIVA	Institutional Securities Exchange
BMV	Mexican Stock Exchange
BONDES	Federal Development Bonds
BPAS	Savings Protection Bonds
CAR	Capitalization ratio
CBFI	Real Estate Investment Trust Stock Certificates
CCE	Special Accounting Criteria
CCD	Certificates of Capital Development
CCV	Mexican Central Securities Counterparty
CDS	Credit Default Swaps
Cenapred	National Disaster Prevention Center
Cerpis	Senior Trust Bonds for Investment Projects
cetes	Federal Treasury Bills
CF	28-Day Equilibrium Interbank Interest Rate (TIIE) Deposit Cost
CFE	Federal Electricity Commission
CFEN	Net Stable Funding Ratio
CGV	Global Value Chains
CNBV	National Banking and Securities Commission
CNSF	National Insurance and Bonding Commission
Conavi	National Housing Commission
Condusef	National Commission for the protection and defense of the users of financial services
Consar	National Commission for the pension system
CyRCE	Capitalization and Credit Risk
CUB	Single Banking Circular
CUE	Single Circular for Issuers
CVAR	Conditional Value at Risk
DOF	Official Gazette of the Federation
DSB	The Derivatives Service Bureau Ltd
D-SIBS	Domestic Systemically Important Banks
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
ECB	European Central Bank
EME	Emerging Market Economies

ERBA	External-ratings-based approach
ESG	Environmental, Social and Governance
ESRB	European Systemic Risk Board
FANVIT	Fund for the Support of Workers' Housing Needs
Fed	Federal Reserve
FIFOMI	Mining Development Trust
Fibra	Real Estate Investment Trust
Fibras e	Energy and Infrastructure Investment Trusts
FIRA	Instituted Trusts in connection with Agriculture (Agricultural Trusts)
FLAO	Additional Ordinary Liquidity Facility
FND	National Farming, Rural, Forestry and Fisheries Development Bank
FONADIN	National Infrastructure Fund
FOVI	Banking Housing Financing Operation Fund
Fovissste	State worker's social security and services institute housing fund
FPL	Permanent Liquidity Facility
FSB	Financial Stability Board
GE	Large Exposures
GDP	Gross Domestic Product
GFC	Global Financial Crisis
ICF	Financial Conditions Index
ICRCS	Capital Solvency Requirement Hedging Index
ICRT	Technical Reserves Hedging Index
IEMF	Financial Markets Stress Index
IFC	Crowdfunding Institutions
NBFI	Non-Banking Financial Institutions
IFPE	Electronic Payment Fund Institutions
IFRS	International Financial Reporting Standards
IGAE	Global Economic Activity Indicator
IIF	Institute of International Finance
IMF	International Monetary Fund
IMOR	Non-performing loans rate
IMORA	Adjusted non-performing loans rate
IMSS	Mexican Social Security Institute
INEGI	National Geographical Statistics and Information Institute
Infonavit	Federal Housing Fund
INPC	National Consumer Price Index
IPYC	Stock exchange index
IRS	Interest Rate Swaps
ITF	Financial Technology Institutions
IVEL	Vulnerability Index of Listed Companies

LCR	Liquidity Coverage Ratio
LDI	Liability Driven Investment
LIBOR	London Interbank Offered Rate
LIF	Federal Income Law
LRITF	Financial Technology Institutions Regulation Law
LTV	Loan to Value
MexDer	Mexican Derivatives Market
Mipymes	Micro, Small and medium-sized companies
Nafin	Nacional Financiera (Mexican Development bank)
NGFS	Network for Greening the Financial System
NICAP	Capitalization Level
NIF	Financial Reporting Standards.
NSFR	Net Stable Funding Ratio
ONBFI	Other Non-Banking Financial Institutions
PEF	Federal Expenditure Budget
Pemex	Mexican State oil company
PLD/FT	Money Laundering and Terrorist Financing Prevention
PRLV	Promissory Note with Interest Payable on Maturity
PTI	Payment to Income
pymes	Small and medium-sized companies
RCS	Capital Solvency Requirement
REIT	Real Estate Investment Trust
RFSP	Public Sector Financial Requirements
ROE	Return on Equity
SAR	Retirement Savings System
SCV	Mortgage Credit Insurance
SHCP	Ministry of Finance and Public Credit
SHF	Federal Mortgage Society
SHRFSP	Historical Public Sector Financial Requirement Balance
siefores	Investment companies specializing in retirement funds (Pension Funds)
socaps	Savings and loan cooperatives
sofipos	Popular finance corporations
sofomes enr	Non-Regulated Multi-Purpose Financial Companies
TIIE	Interbank Equilibrium Interest Rate
TMEC	United States-Mexico-Canada Agreement
UMA	Unit of Measuring and Updating
UMI	Infonavit Mixed Unit
UPI	Unique Product Identifier
VSM	Minimum Salary Multiple



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