Fundación MAPFRE

CREDIT AND INSURANCE ACTIVITY

MAPFRE Economics

Credit and Insurance Activity

Cite as follows:
MAPFRE Economics (2024), *Credit and Insurance Activity*, Madrid, Fundación MAPFRE.

© Text:
MAPFRE Economics - mapfre.economics@mapfre.com
Spain: Carretera de Pozuelo, 52 - Edificio 1
28222 Majadahonda, Madrid
Mexico: Avenida Revolución, 507
Col. San Pedro de los Pinos
03800 Benito Juárez, Mexico City

© For this edition:
2024, Fundación MAPFRE
Paseo de Recoletos, 23. 28004 Madrid
www.fundacionmapfre.org

December 2024.

MAPFRE Economics

Manuel Aguilera Verduzco
General Manager
avmanue@mapfre.com

Ricardo González García
Director of Analysis, Sectorial Research and Regulation
ggricar@mapfre.com

Gonzalo de Cadenas Santiago
Director of Macroeconomics and Financial Analysis
gcaden1@mapfre.com

José Brito Correia
jbrito@mapfre.com

Begoña González García
bgonza2@mapfre.com

Isabel Carrasco Carrascal
icarra@mapfre.com.mx

Fernando Mateo Calle
macafee@mapfre.com

Rafael Izquierdo Carrasco
rafaizq@mapfre.com

Eduardo García Castro
gcedua1@mapfre.com

Johannes Ricardo Rojas Díaz
jrroja1@mapfre.com

Isabel Diez de Rivera Vergara
Clemente Ruiz-Tagle Silva
Álvaro Arroyo Hernández
Ana Díaz Miguel
Ikram Khay Laabi

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Presentation

Fundación MAPFRE is pleased to present this new MAPFRE Economics study entitled *Credit and Insurance Activity*, which analyzes the evolution and role of credit in the economy and how it relates to insurance demand. Credit volume is an essential economic variable that influences various areas of the economy, stimulating consumption and investment, two macroeconomic variables that have a direct influence on all activity lines of the insurance industry.

Chapter one of the report analyzes the relationship between the evolution of credit and insurance activity in developed and emerging economies, examining nine key markets: United States, Mexico, Brazil, United Kingdom, Spain, Germany, Turkey, Japan, and South Korea. We examine historical series that break down the three main components of credit to the non-financial sector (governments, households, and non-financial companies), as well as its banking penetration, establishing its correlation with insurance industry premiums. Chapter two explores how capital market development facilitates economic agents' access to financing, while chapter three evaluates the influence of credit cycles on the economy and the insurance industry. Chapter four highlights the importance of a formal labor market, with regulated contracts and adequate social protection systems, and compiles public policy measures recommended by international organizations to combat informality, especially in developing countries. Finally, the last chapter examines the impact of recent demographic trends on bank lending and, by extension, on insurance activity.

The mission of Fundación MAPFRE is to contribute to the improvement of people's quality of life and the progress of society through multinational programs and activities. Thus, the publication of this study is part of the foundation's activities to disseminate knowledge, insurance culture, and social welfare, and to transmit the importance of the insurance industry as a fundamental piece of economic development and improved social well-being.

Fundación MAPFRE

Introduction

As part of its ongoing series of studies analyzing the connections between the insurance industry and various economic and social sectors, MAPFRE Economics presents this report, exploring the relationship between insurance demand and credit activity. The report examines the evolution of credit and its influence on insurance activity, highlighting its impact on consumption and investment, key factors for understanding the expansion of both the Life and Non-Life insurance segments. To that end, nine markets representative of North America, Latin America, Europe, and Asia are analyzed, focusing on the three main components of credit activity from a macroeconomic perspective: government credit, household credit, and credit to non-financial companies.

Another key focus of the study is the development of capital markets, comparing the financing structures in developed markets with those in emerging markets and developing countries. In the latter environments, financial development faces challenges such as limited connectivity and low confidence, requiring public policies that facilitate access to digital and inclusive financial services. The report also addresses the way in which credit cycles affect variables such as housing, automobiles, and consumption, impacting the insurance industry. It highlights that while credit expansion drives profits, unchecked growth could lead to significant economic crises.

Additionally, the study analyzes labor informality as a limiting factor for banking penetration, which also raises credit risks due to information asymmetry. Finally, demographic trends, such as population aging, which are crucial for understanding the potential for insurance demand, also affect credit growth. Thus, the study explores these dynamics and their main implications for credit and insurance demand.

MAPFRE Economics

Executive summary

Evolution of credit and its role in insurance activity

Credit volume is a key economic variable that influences various areas of the economy, including insurance. It plays a pivotal role in stimulating consumption and investment, two macroeconomic factors that directly influence all areas of insurance activity, in both the Non-Life insurance segment (Motors insurance, policies for household, commercial, and business property, or personal injury coverage) and the Life insurance segment. This includes insurance associated with granting credit (in case of the death, incapacity, or disability of the debtor), which also serves as a guarantee to creditors of direct or indirect loans (through coverage of collateral associated with credit), which contributes to the stability and good operation of the financial system. Globally, the relationship between credit and insurance demand is particularly significant when comparing insurance premiums to the volume of household and company credit. This connection is even more pronounced in developing countries and emerging markets, where the comparison between insurance premiums and household credit would account for 83.3% of insurance premium variability in these markets.

To delve deeper into the link between credit and insurance activity, the subject of this report, we present an analysis of a selection of representative markets. This selection covers key regions around the world: North America (United States), Latin America (Mexico and Brazil), Europe (United Kingdom, Spain, and Germany), and Asia (Turkey, South Korea, and Japan). In all cases, we have utilized extensive historical data, comparing the weight of the evolution of the three largest components of credit to the non-financial sector—government, household, and non-financial company credit—as well as the level of banking penetration.

Development of the capital market

In addition to focusing on financing from the banking system, this report analyzes the development of the capital market, the mechanism through which various economic agents access financing, an environment where banking financial intermediaries are often the traditional protagonists. The United States is a notable exception, with a credit system more oriented towards capital markets, where a large portion of business financing comes directly from these markets, through a wide variety of financing instruments and deep primary and secondary global markets that facilitate their liquidity.

In bank-based financial systems, such as those of Europe, banking entities are the main intermediaries that convert deposits into loans, assessing borrower risks and assuming these risks on their balance sheets. Thus, in countries like Germany, France, Italy, and Spain, banking penetration has been central to financing, especially for small and medium enterprises (SMEs) and sectors such as real estate. A developed capital market connects institutional investors, such as fund managers and insurance companies, with companies seeking capital for growth, diversifying their sources of financing. This investment model is

particularly important for startups, growing companies, and strategic sectors, such as technology or renewable energy, among others, a pending issue in the European Union, which is trying to improve this through the Capital Markets Union initiative.

Meanwhile, emerging markets and developing countries need improvements in their financial infrastructure, both in banking and capital markets, overcoming barriers such as lack of physical access to financial services, low digital connectivity, and widespread distrust of the system. Establishing networks of branches, correspondent agents and technological improvements, accessible digital payment platforms, in addition to simplifying requirements to open accounts and designing inclusive financial products, are steps that must be addressed by public policy in those countries.

Credit and risk cycles for the insurance industry

Credit cycles can be extremely significant for the economy and, by extension, for the insurance industry, as they affect variables like new housing construction, real estate prices, or new vehicle registrations. They also impact nominal GDP and private consumption, which have repercussions on all areas of the insurance industry. Emerging markets and developing countries have much lower credit-to-GDP ratios than developed markets, which have stronger capital markets and better credit ratings. These advantages enable their economies to sustain higher levels of debt without, in principle, causing financial stability issues. However, as history has proven, uncontrolled credit expansion can lead to severe economic crises in these markets as well.

Thus, the expansion of private sector lending (households and companies) clearly has a positive impact on insurance activity, especially in emerging markets and developing countries. However, such expansion is not without risks. Excessive growth and acceleration of credit, along with the relaxation of lending standards, can trigger or aggravate an economic crisis (as seen in Japan in the 1990s or the United States in 2008), resulting in a crisis with global consequences. Thus, when assessing risk from a credit perspective across different economies, we must consider both the debt level of the countries relative to the size of their economy and the current phase of the credit cycle, keeping in mind the comparison with the long-term historical average, in proportion to GDP (credit gap or credit-to-GDP gap). In this regard, section three of this report presents a detailed comparison of credit gaps for each component (governments, households, and companies), as well as of the current phase of the credit cycle for the 40 markets analyzed.

Credit, banking penetration level, and the informal economy

Economic development, supported by a labor market based on formal labor relations, regulated labor contracts, and an adequate social protection system, is crucial for the development of credit, especially to the private sector. In formal economies, the banking penetration level is backed by well-developed financial infrastructures and a broad population base earning regulated salaries. These economies also have access to financial information, legal documentation, and personal identification systems that facilitate operations.

Conversely, the informality that characterizes labor relations in emerging markets and developing countries makes it very complicated to go through a credit granting process. In cases where credit is extended, substantially higher interest rates are applied due to the financial risk associated with information asymmetry, which increases the uncertainty for financial intermediaries. These combined factors severely limit the informal population's access to credit, further entrenching low productivity and limiting opportunities for economic growth for companies as well as individuals and their businesses.

In this regard, section four of this report delves deeper into public policy measures that could help address this situation, particularly in emerging markets and developing countries. The analysis draws on recommendations from international organizations, mainly the International Labour Organization, the World Bank, and the Organisation for Economic Co-operation and Development. These measures aim to improve the financial situation of workers and small entrepreneurs, enhancing their savings capacity and enabling them to invest in their businesses and access financial services that were previously unavailable to them, thereby reducing their financial vulnerability.

Credit, demographic evolution, and population aging

Demographic trends since the end of the 20th century, characterized by a sustained drop in birth and mortality rates, and the resulting increase in life expectancy, have significantly impacted the composition of the population by age group. This change in the population's age structure in many developed countries, and increasingly in emerging ones, is characterized by the progressive aging of the population, with a growing proportion of people approaching retirement age, who also benefit from an increase in life expectancy.

This demographic change, which is essential for analyzing the potential of insurance activity, also has an impact on bank lending. Most studies on this topic conclude that one of the consequences of population aging is a contraction in credit. This trend is largely attributable to the lower risk appetite of older individuals, the decline in household savings rates, and banks' diminishing willingness to take on risk as a result of population aging. Credit demand often follows a *life cycle* pattern, peaking during the working years of younger, productive individuals and dropping to relatively low levels toward the end of their careers. Section five of this report explores these issues in greater detail.

1. Evolution of credit and its role in insurance activity

Credit plays a crucial role in the development of a country's economy, as it allows economic agents (governments, households and companies) to adjust consumption decisions based on their needs and make the necessary investments to finance their activities without waiting to generate the required resources. Thus, credit is a fundamental economic variable that influences various areas of the economy, including insurance activity.

1.1 Main credit-related magnitudes analyzed

For the purposes of this study, we focus on credit-related magnitudes that directly affect the real economy and, consequently, insurance activity. These primarily include total credit to the non-financial sector, that is, lending to governments, households, and companies. However, they do not include loans made to financial entities or those they receive from central banks, to avoid duplication, as these are often internal transactions within the financial system and only impact the real economy when granted to non-financial economic agents. For example, central banks frequently aim their credit policies at the non-financial sector as part of their monetary measures, because this directly impacts the level of leverage in the real economy and their capacity to stimulate or curb growth in their fight against inflation, depending on how the monetary policy transmission channels operate.

The classification used by key international organizations, mainly the Bank for International Settlements (BIS), the International Monetary Fund, the World Bank, and the Organisation for Economic Co-operation and Development (OECD), based on the national accounting classification of the different countries, was followed in the analysis of different components of credit to the non-financial sector. Credit to the non-financial sector is divided into three main components: (i) general government credit; (ii) credit to households (which includes non-profit organizations, NPOs); and (iii) credit to non-financial corporations.

Under total credit to the non-financial sector, the components of credit to households (and NPOs) and credit to non-financial corporations are generally referred to as *private sector lending*. Some studies further break down private sector lending by distinguishing between credit issued by the banking sector (for households and the corporate sector) and other sources, sometimes referred to as "shadow banking," particularly in the context of financial stability after the global recession of 2008. However, the negative connotations that led to the use of this term are now less prominent, as this component of credit can play an important role in private sector investment as a supplement to bank lending, provided risks are adequately managed and depending on the level of capital market development in different countries.

The general government credit component often refers to credit granted to the public administration sector, which encompasses all levels of government (federal, national, regional, and local). In this report, we also refer to this component as *public sector lending*. The same applies to credit to households and non-profit organizations (NPOs), which this study refers to as *credit to households*, and credit to non-financial corporations, which is referred to as *credit to companies* for clarity, though they refer to the same concepts.

1.2 Credit and insurance activity

Credit plays a fundamental role in insurance activity, as it stimulates consumption and investment. These two macroeconomic variables directly influence insurance demand in all activity lines, in both the Non-Life insurance segment (Motors insurance, and home, commercial or business property, or personal injury coverage), and Life insurance. This includes policies associated with granting credit (in the case of death, incapacity, or disability of the debtor), further acting as a guarantee to creditors of direct or indirect loans (through coverage of collateral associated with credit), which contributes to the stability and good operation of the financial system.

1.2.1 Global analysis

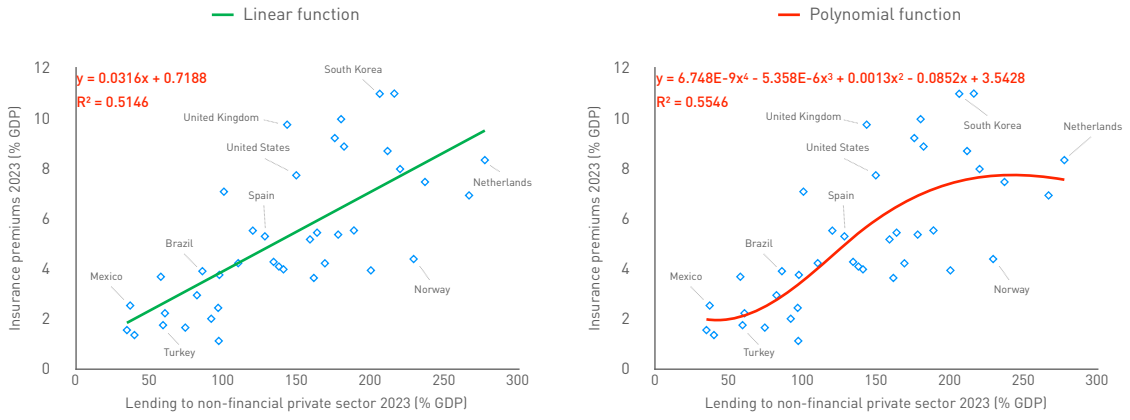
The correlation analysis presented below reveals that globally, the ratio between credit and insurance activity is especially relevant when comparing insurance premiums with the volume of credit to the non-financial private sector, both expressed as a percentage of GDP. This includes credit to both households (and non-profit organizations) and non-financial companies. The analysis shows a significant coefficient of determination of 55.5 in the best fit, resulting in the polynomial function shown in Chart 1.2.1. This indicates that, in explaining insurance premium performance in 2023, the variability in the level of private lending accounts for 55.5% of the variability in insurance premiums, as a percentage of GDP, while the rest would be attributable to other factors.

It is also worth noting that the fit of the polynomial function shows positive elasticity in insurance premium variability with increases in private sector lending, such that when credit is less developed, its increase leads to a greater proportional growth in insurance premium penetration in the economy (premiums/GDP). On the other hand, the regression analysis did not find any direct correlation between the volume of insurance premiums and general government credit (i.e., credit to the public sector).

1.2.2 Developing and emerging markets

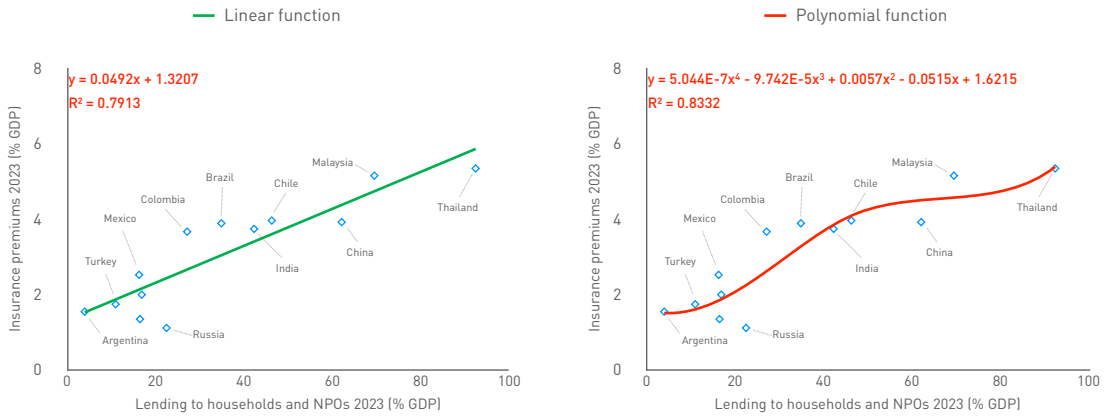
In the case of developing and emerging markets, the relationship between credit and insurance activity is especially relevant when comparing insurance premiums with the volume of credit to households (and

Chart 1.2.1
Global markets: lending to the non-financial private sector vs. insurance premiums (% GDP) (fitted regression lines)



Source: MAPFRE Economics (based on data from BIS and Swiss Re)

Chart 1.2.2
Emerging and developing markets: lending to households and NPOs vs. insurance premiums (% GDP) (fitted regression lines)



Source: MAPFRE Economics (based on data from BIS and Swiss Re)

non-profit organizations). This results in a higher coefficient of determination of 83.3 in the best fit, resulting in the polynomial function shown in Chart 1.2.2. This means that, in explaining the performance of insurance premiums in 2023 in developing and emerging markets, the variability in credit to households (and non-profit organizations) accounts for 83.3% of its variability, while the rest would be attributable to other factors. Similarly, as with global markets for private sector lending, in the regression analysis, the fit of the polynomial function shows positive elasticity in the variability of insurance premiums with increases in household credit in emerging markets. When credit is less developed, its increase leads to greater proportional growth in insurance premium penetration in the economy (premiums/GDP).

1.3 Analysis of selected markets

To better understand the relationship between the evolution of credit and insurance activity, below we present an analysis of a selection of representative markets from key global regions: North America (United States), Latin America (Mexico and Brazil), Europe (United Kingdom, Spain, and Germany), and Asia (Turkey, South Korea, and Japan). This analysis uses long historical series comparing the evolution of the three largest components of credit to the non-financial sector, that is, government, household, and non-financial company credit, as well as the level of banking penetration. We also compare the evolution of premiums in the insurance industry in these markets, using the two components that have proven to have a significant correlation with insurance activity: household credit and credit to companies (non-financial).

1.3.1 United States

The U.S. economy presents a unique case with a complex credit system that is profoundly integrated into the global economy. Credit is a fundamental pillar of the country's economic model, for both households and business innovation. Both federal and state/local governments, as well as companies and households in the U.S., have vast access to credit. Notably for the latter, mortgages are the main component of credit, followed by consumer loans and credit cards. Meanwhile, small and medium-sized companies, startups, and

large corporations rely heavily on credit to finance their activities, with access to both bank lending and credit that can be obtained directly through the world's most developed capital market. This means that any project that is economically viable can quickly access financing that is not available in other world economies.

Evolution of credit by component

Chart 1.3.1 shows a historical series since 1947 showing the evolution of credit as a percentage of GDP in the United States, broken down into the three main components of general credit: government credit (federal, state, and local), household credit (which includes non-profit organizations), and credit to non-financial companies. At the close of 2023, these three major components represented 106.4%, 72.9%, and 77.0% of GDP, respectively. This means that total non-financial sector credit on that date represented 256.3% of U.S. GDP, compared to 141.7% in 1947. All these components show a sustained growth trend throughout the period, with the notable exception of public sector lending, which experienced an inflection point around mid-1984, when it began rising in both absolute and relative terms (measured as percentage of GDP).

The evolution of the three major categories of credit in dollar terms (measured on an index of 1947=100) highlights their dynamic nature, particularly private sector lending, which dominates debt accumulation, reaching current levels of nearly 150% of GDP. This figure includes credit to both non-financial companies and households (and other non-profit organizations). Government debt, which remained around 60% of GDP in the years before the 2008 financial crisis, has since grown significantly, driven mainly by expansionary fiscal policies implemented in response to that financial crisis and, later, the COVID-19 pandemic, exceeding 100% of GDP (Chart 1.3.1-a).

This rise in public sector lending has been influenced by not only expansionary fiscal policies implemented in response to the aforementioned crises, but also the Federal Reserve through its monetary policy. Through its decisions on interest rates and asset purchase programs, primarily involving Treasury bonds and fixed-income mortgage-backed securities, the Federal Reserve facilitates or restricts access to credit based on the economic cycle. In times of crisis, like the great financial crisis of 2008 and 2020 pandemic lockdowns, the Federal Reserve took extraordinary measures to massively increase liquidity in the system and slash interest rates, allowing credit to remain accessible to governments, households, and companies. However, this approach poses challenges, especially in a context of rising inflation. The subsequent interest rate hike could have limited access to credit and slowed economic growth. But this time the U.S. economy was resilient and only slowed slightly without triggering a recession, which has often occurred in previous cycles following a tightening of monetary policy.

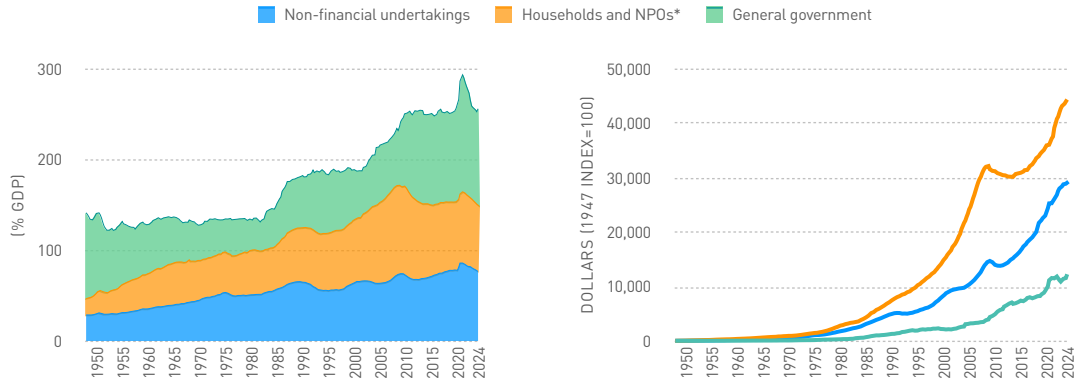
Another key aspect of the U.S. financial system is its strong connection to international markets, due to the widespread use of the U.S. dollar as a global reserve currency. This has allowed the United States to benefit from constant inflows of foreign capital, but also makes it vulnerable to global liquidity crises. Cross-border credit plays a crucial role, particularly for large corporations operating in multiple markets. However, these companies are also exposed to risks associated with exchange rate fluctuations and geopolitical tensions.

Private sector lending and banking penetration level

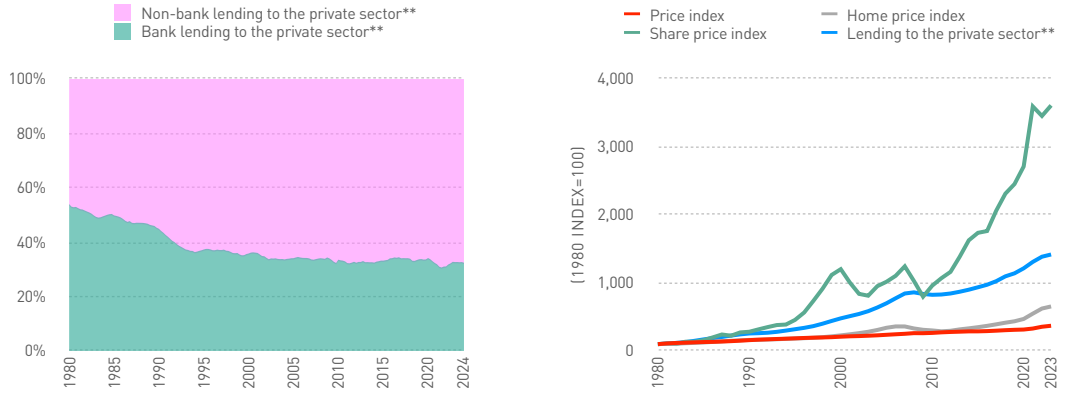
The deep development of the United States' capital markets, as well as the ability to access credit through alternative channels outside of banks, is reflected in the composition of credit to the non-financial private sector (households and companies). At the close of 2023, non-bank

Chart 1.3.1
United States: evolution of lending activity

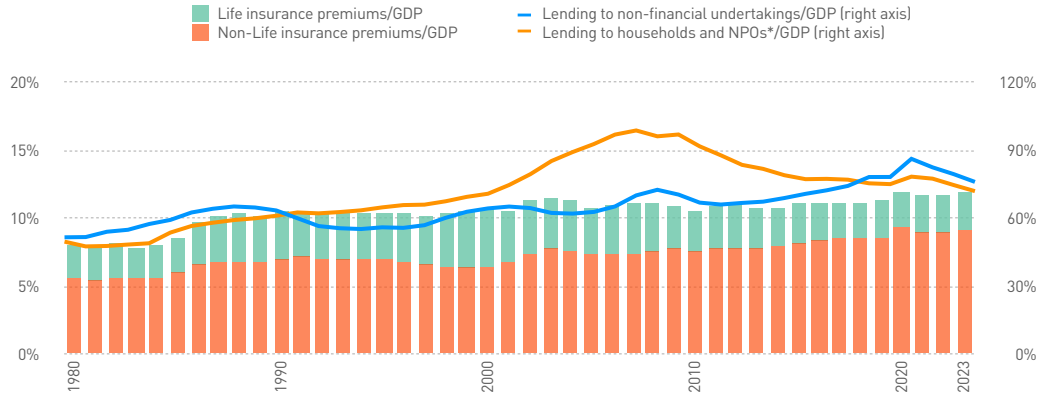
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

lending represented 67.4% of total private sector lending, greatly exceeding bank lending, which accounted for only 32.6%, a percentage substantially lower than in other developed economies around the world. The aforementioned Chart 1.3.1 offers a comparative view of the evolution of private sector lending and other economic indicators which are indirectly related to insurance activity, through amounts insured and in the industry's investment portfolios. The significant growth in equity valuations, much higher in the United States than the increase in housing values and the general consumer price index, is noteworthy. However, from a risk management perspective, it should be noted that at the beginning of this century and in 2007, equities experienced abrupt corrections that were more significant than those seen in real estate assets, which followed a path more in line with the evolution of private sector lending (Chart 1.3.1-b).

Insurance activity and components of private sector lending

Chart 1.3.1 compares the dynamics of credit and insurance activity in the United States, comparing the performance of credit to households and companies with the insurance industry's premium volume, in both the Life and the Non-Life business, all as a percentage of GDP. It is evident that, in normal periods, the behavior of insurance premiums in the United States follows, to a greater or lesser extent, the path of private sector lending (both measured as a percentage of GDP), especially with regard to household credit. There are, however, specific periods when it deviates from that path, such as in the years before and after the 2008 financial crisis and the COVID-19 pandemic, when nominal GDP experienced strong contractions and expansions. These fluctuations were transferred to these indicators to varying degrees (Chart 1.3.1-c).

1.3.2 Mexico

Credit to the non-financial sector in Mexico has experienced sustained growth over the last two decades. This increase is linked to the strengthening of the financial system following the structural reforms in the second half of the 1990s and the growing access to credit by households, the government, and companies. This growth reflects the development of domestic demand, allowing access to financing for key sectors, such as infrastructure and real estate. Access to foreign financing for large-scale projects, as well as the participation of the public and private sectors in the international capital markets, is greatly aiding this development. For economies like Mexico's, credit in dollars is still a key source of financing, but it can also create vulnerabilities, especially in times of exchange rate volatility, requiring constant monitoring to avoid macroeconomic imbalances.

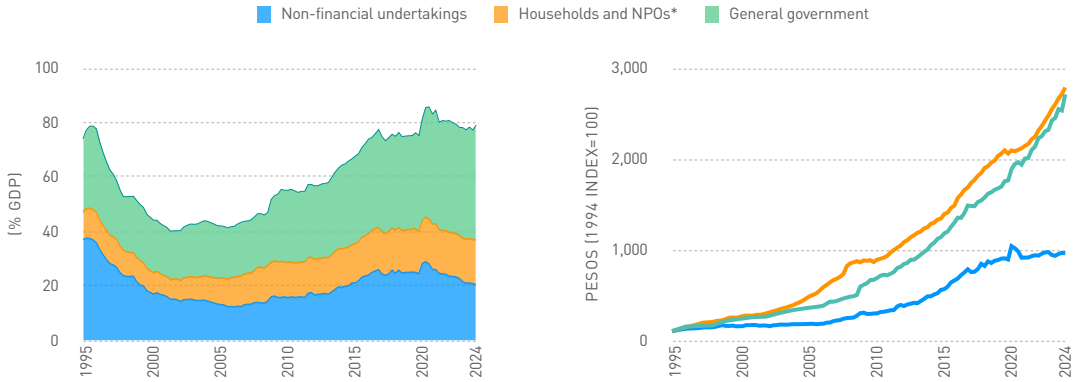
Evolution of credit by component

Chart 1.3.2 presents a historical series since 1995 of the evolution of credit to the non-financial sector as a percentage of GDP in Mexico, broken down into the three main components: credit to governments (federal, state, and local), to households (and other non-profit organizations), and to companies (non-financial). According to this information, at the close of 2023, these three major components represented 40.0%, 16.3%, and 20.9% of GDP, respectively. This means total credit to the non-financial sector on that date stood at 77.2% of GDP, versus 74.0% in 1994. Two different phases can be observed in this period: The first, from 1995 to 2001, saw a downward trend, reaching a minimum of 40.2% of GDP. The second, from 2002 to 2020, was characterized by an upward trend, when it reached 85.8% GDP, after which it stabilized, with a slight decline in the last three years (Chart 1.3.2-a).

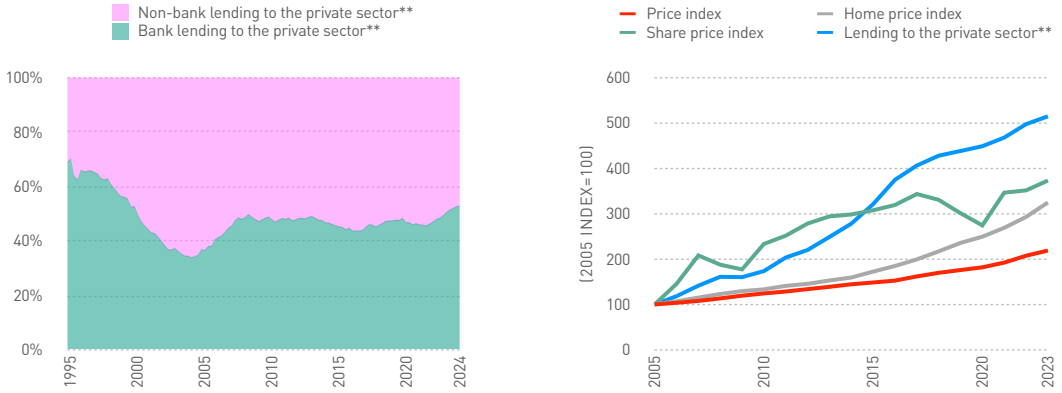
This increase in credit was driven by the liberalization of the financial system and policies aimed at improving access to credit for companies and households. The growth of private sector lending allowed many Mexican companies, particularly in the manufacturing and services sectors, to finance their operations and to expand, which has had a positive impact on the country's

Chart 1.3.2
Mexico: evolution of lending activity

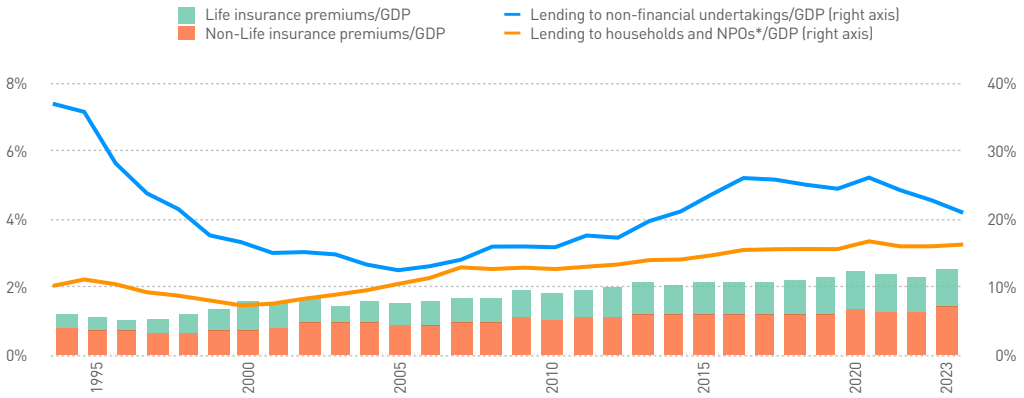
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

economic development. Thus, private lending to the non-financial sector in Mexico, measured in pesos at an index of 1994=100, has demonstrated sustained growth since the late 1990s, especially in household and public sector lending.

Despite the progress made in recent decades, it is important to note that the Mexican credit market has significant potential, as reflected in the still-low percentage of all components of non-financial credit with respect to GDP when compared with other developed markets.

Private sector lending and banking penetration level

In the composition of private sector credit (households and companies), the share of bank lending represents 47.3%, below the 52.7% of credit from non-bank lenders. This composition differs from that of other emerging markets, such as Brazil, in which banks have a greater share of private sector lending. The aforementioned Chart 1.3.2 offers a comparative view of the evolution of private sector lending and other economic indicators which are related to insurance activity, through the amounts insured and in the industry's investment portfolios. Residential real estate assets have followed a path of sustained growth above the general price index. In comparison, by the end of the period, the valuation of equities was higher than the increase in housing values and the general consumer price index. From a risk management perspective, it is notable that equities experienced sudden corrections during crisis periods, as opposed to what happened to residential real estate assets (Chart 1.3.2-b).

Insurance activity and components of private sector lending

Finally, Chart 1.3.2 compares the dynamics of credit and insurance activity in Mexico, showing the performance of the components of credit to households and companies compared with the insurance industry's premium volume, in both the Life and Non-Life insurance segments, all indicators expressed as a percentage of GDP (Chart 1.3.2-c). The behavior of insurance premiums in Mexico has closely mirrored the growth trajectory of household credit since the beginning of this century, after overcoming the crisis of the second half of the 1990s. During that period, nominal GDP experienced strong contractions and expansions, leading to distortions that were reflected in these indicators to varying degrees.

1.3.3 Brazil

After the global financial crisis of 2008, Brazil experienced significant growth in both public sector lending (driven by expansionary fiscal policies and greater public sector participation in the economy) and private sector lending (especially household credit, which, however, continues to have the lowest relative share with respect to the Brazilian GDP).

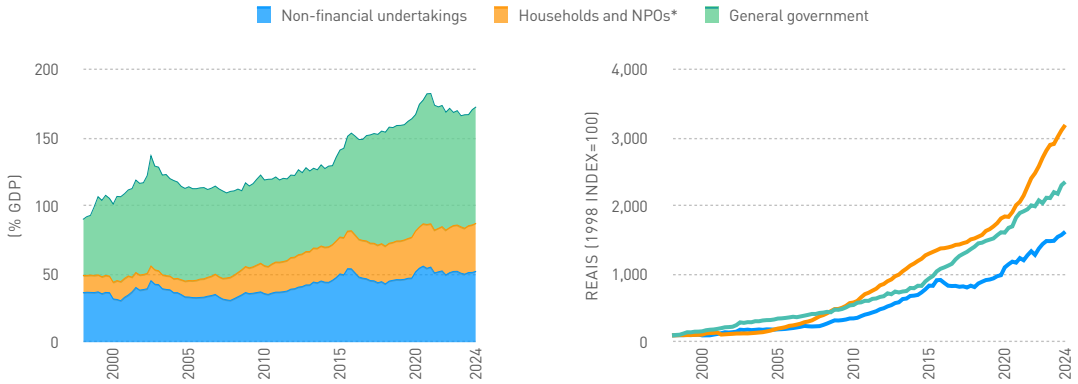
Evolution of credit by component

Chart 1.3.3 shows a historical series since 1998 of the evolution of credit to the non-financial sector as a percentage of GDP in Brazil, broken down into the three major components of credit: to governments (federal, state, and local), to households (and other non-profit organizations), and to companies (non-financial). At the close of 2023, these three major components represented 84.7%, 34.9%, and 51.3% of GDP, respectively. This means total credit to the non-financial sector on that date represented 170.9% of Brazilian GDP, versus 90.3% at the beginning of 1998 (Chart 1.3.3-a).

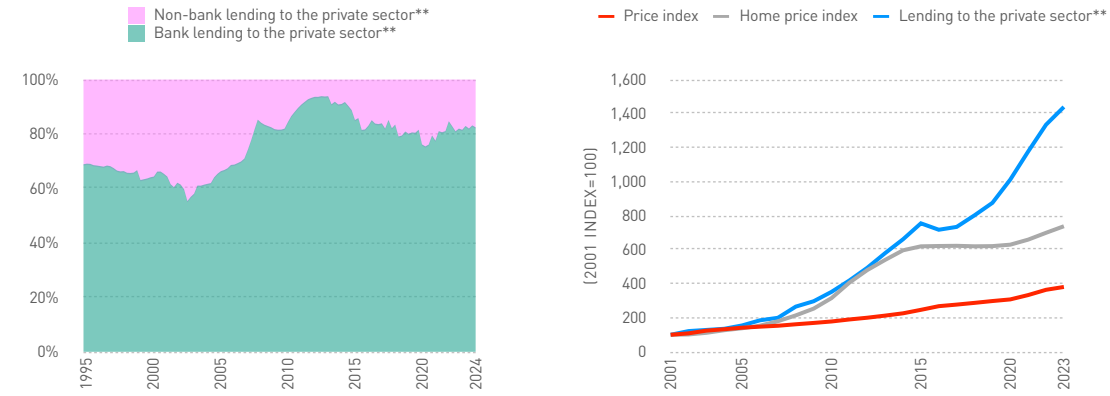
The analysis of the evolution of the three major credit components in Brazilian reals, measured at an index of 1998=100, reveals strong dynamism across all of them, but particularly household credit and public sector credit. Thus, credit in local currency has shown sustained growth since the global crisis of 2008, driven by policies that favor internal financing in Brazilian reals. Since then, credit in local currency has been pivotal in the

Chart 1.3.3
Brazil: evolution of lending activity

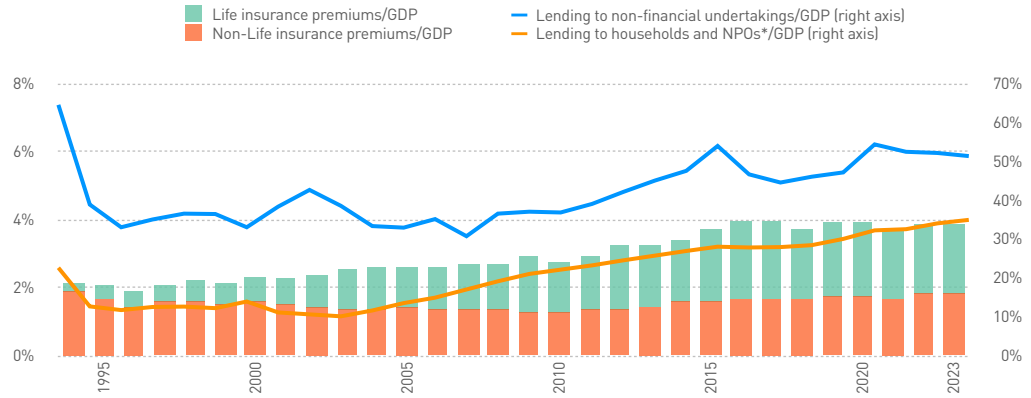
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

financing of strategic sectors, such as real estate and private consumption. In addition, the public sector has benefited from this type of credit to implement expansionary policies and to finance infrastructure projects. This approach provided Brazil with greater stability in the face of external shocks, such as fluctuations in the value of the dollar. It also allowed the country to maintain flexibility in its economic policy, mitigating the financial risks and strengthening its economic autonomy. It should be noted that the financing of large infrastructure projects and corporate expansions in dollars has also played a relevant role in Brazil, with participation of both the private and public sectors, showing its capacity to access international financing.

Private sector lending and banking penetration level

When analyzing private sector lending (to households and companies) and the level of banking penetration in Brazil, we can highlight the advanced development of the banking sector. At the close of 2023, such credit represented 83.2% of the total, greatly exceeding non-bank lending, which represented 16.8%, significantly lower than in other emerging and developed economies, which underscores the importance of banks in the Brazilian economy. Meanwhile, the aforementioned Chart 1.3.3 offers a comparison of the evolution of private sector lending and other economic indicators which are in turn related to insurance activity. In this regard, residential real estate assets in Brazil have been appreciating above the general price index, following the trend of private sector lending, albeit at a slower pace (Chart 1.3.3-b).

Insurance activity and components of private sector lending

To compare the dynamics of credit and insurance activity in Brazil, Chart 1.3.3 shows the performance of the components of credit to households and companies, compared to the insurance industry's premium volume in both the Life and the Non-Life insurance segments, with all indicators expressed as a percentage of GDP. As this information shows, the behavior of insurance premiums in Brazil has followed the growth path of household credit over the past decade (Chart 1.3.3-c).

1.3.4 United Kingdom

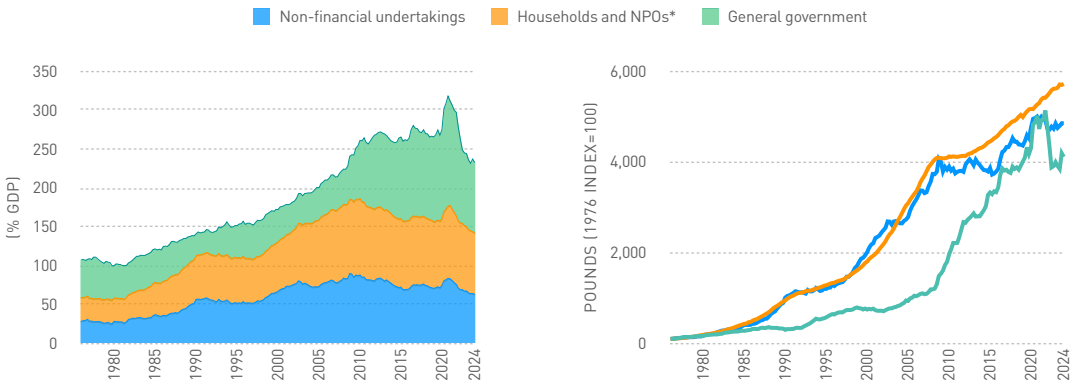
The United Kingdom stands out as one of the most important financial centers in the world, with an advanced credit system that is highly integrated with the global economy. However, it should be noted that this country has experienced significant fluctuations in credit behavior due to events such as the global financial crisis of 2008, the Brexit referendum, and the COVID-19 pandemic.

Evolution of credit by component

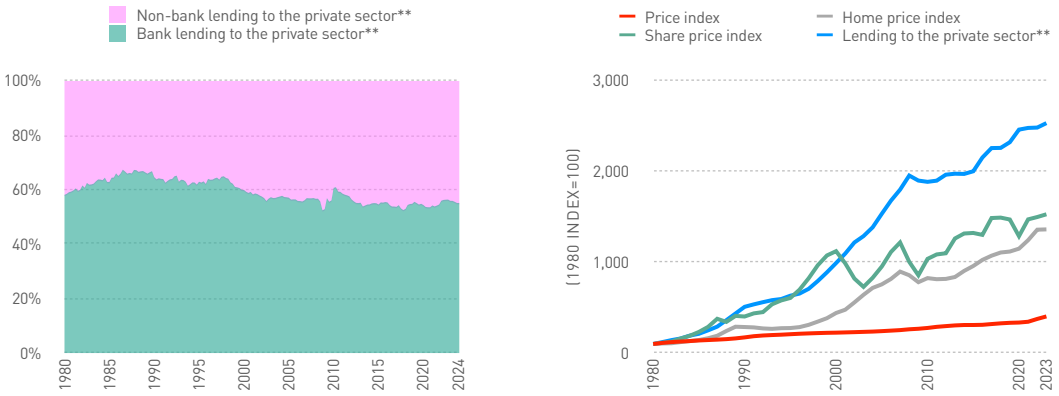
Chart 1.3.4 shows a historical series since 1976 of the evolution of credit as a percentage of GDP in the United Kingdom, broken down into the three major components of general credit: to governments, to households (and other non-profit organizations), and to companies (non-financial). According to this information, at the close of 2023, these three major components represented 93.4%, 79.5%, and 64.2% of GDP, respectively. This means total credit to the non-financial sector on that date represented 237.1% of the United Kingdom's GDP, versus 105.5% in 1976. Supplementing this analysis, the evolution of the three largest components of credit are shown in pounds, measured at an index where 1976=100, demonstrating the strong dynamism of all of them, but especially private sector lending to both non-financial companies and households, which have experienced sustained growth throughout the entire series, reaching levels of 143.7% of GDP at the close of 2023 (Chart 1.3.4-a). It should be noted that mortgage loans are particularly prominent, as access to housing is a central theme in the British economy. In addition, consumer credit, including credit cards and personal loans, plays a fundamental role in the performance of household expenditures. The close connection between corporate

Chart 1.3.4
United Kingdom: evolution of lending activity

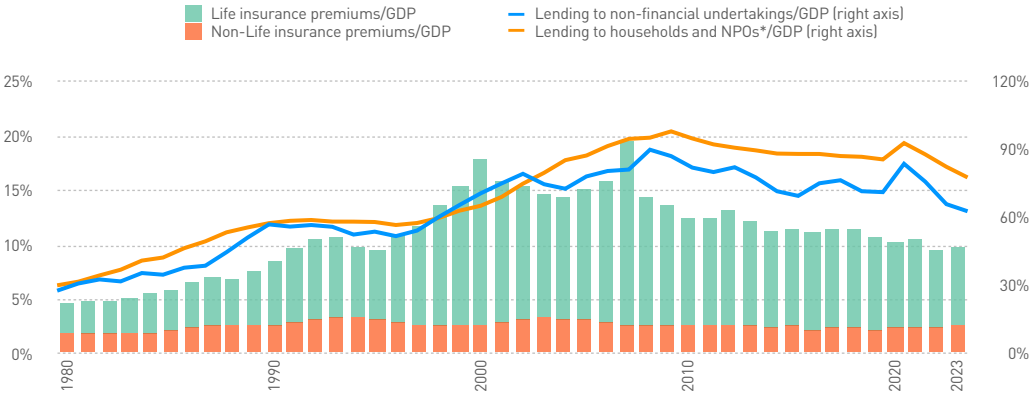
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

credit, financial services, and large companies is notable. These have widely used internal and external credit to finance expansion and acquisition projects, while small and medium enterprises (SMEs) depend largely on bank lending lines.

Public sector lending had been growing at a slower rate than private sector lending, maintaining levels around 45% of GDP until the 2008 financial crisis, after which the rate of growth accelerated substantially, more rapidly increasing its share in the composition of total credit to the non-financial sector (public and private). This was driven mainly by expansionary fiscal policies implemented in response to the crisis, followed by the United Kingdom's withdrawal from the European Union after the 2016 referendum and the economic crisis caused by the COVID-19 pandemic in 2020. Public sector lending reached a maximum of 141.4% of GDP at the end of that year. These expansionary fiscal and monetary measures, aimed at mitigating the impact of global and domestic events, have created concerns about the long-term sustainability of public finance, especially in the post-Brexit environment, with structural economic challenges. Measures adopted since then reduced those levels to 90.6% of GDP at the close of Q1 2024.

Private sector lending and banking penetration level

The highly developed credit and capital markets of the United Kingdom are reflected in the composition of total credit to the non-financial private sector (households and companies), where non-bank lending represented 44.9% of total credit to the non-financial sector at the close of 2023. The aforementioned Chart 1.3.4 also offers a comparative view of the evolution of private sector lending and other economic indicators, which are indirectly related to insurance activity through amounts insured and investment portfolios. The significant growth in the valuation of residential real estate in the United Kingdom, far outpacing the increase in the general consumer price index and closely mirroring the performance of equities, is noteworthy. However, from the risk management perspective, it stands out that during periods of economic crisis, equities experienced sharper corrections than real estate assets, which followed a path more closely aligned with, although below, the evolution of private sector lending (Chart 1.3.4-b).

Insurance activity and components of private sector lending

Finally, Chart 1.3.4 compares the dynamics of credit and insurance activity in the United Kingdom, showing the performance of the components of credit to households and companies compared with the insurance industry's premium volume in both the Life and the Non-Life segments, with all indicators expressed as a percentage of GDP. In this regard, the performance of insurance premiums in the United Kingdom followed the path of private sector lending (both measured as a percentage of GDP) in all series analyzed, both in reference to household credit and lending to the non-financial corporate sector (Chart 1.3.4-c).

1.3.5 Spain

In Spain, in general, the evolution of the major credit components shows singular behavior, with three different phases, from the second half of the 1990s to the present.

Evolution of credit by component

Chart 1.3.5 shows a historical series since 1995 of the evolution of credit as a percentage of Spain's GDP, broken down into its three major components: general credit to the government, to households (and other non-profit organizations), and to companies (non-financial). According to this analysis, at the close of 2023, these three major components represented 104.8%, 46.9%, and 81.7% of GDP, respectively. This means total credit to the non-financial sector (public and private) on that date represented 233.4% of

Spanish GDP, versus 141.0% at the beginning of 1995 (Chart 1.3.5-a).

As stated previously, in the evolution of the three major credit components, measured at an index of 1995=100, differences are clearly observed in three phases related to the credit cycle in the Spanish economy. A first phase begins in the second half of the 1990s, before the euro came into circulation, when the three components of general credit (to the government, to households, and to non-financial companies) grew only slightly and in step with each other. The second phase, in which the previous growth pattern is completely broken, coincides with the decision to adopt the euro as legal tender in Spain in the late 1990s and its final introduction as the official currency in January 2002, extending through the global financial crisis of 2008. In this second phase, accelerated growth is observed in private sector lending to both households and the non-financial corporate sector (fueled by the rapid expansion of the banking sector's balance sheets and credit to the real estate sector), while public sector lending remains constant and even declines in some years. The third phase began with the global financial crisis of 2008 and Eurozone sovereign debt crisis of 2012, which caused a severe economic crisis in Spain. This particularly affected the real estate and banking sectors, resulting in strong growth of public sector lending, accompanied by a process of reduction of private sector leverage.

Thus, the boost in public sector lending from the expansionary fiscal policies implemented in response to the 2008 financial crisis, the 2012 sovereign credit crisis and, finally, the economic crisis caused by the COVID-19 pandemic of 2020, led to an expansion of sovereign credit in Spain, reaching a peak of 142.7% of GDP in Q1 2021. However, the European Central Bank's (ECB) asset purchase programs—both the one it had been implementing since the 2012 crisis and the extraordinary program to support sovereign credit issued to finance fiscal measures deployed to offset the economic effects of the pandemic (in Spain and across the Eurozone) —prevented a spike in the risk premium, despite the sharp increase in the volume of government credit. Since then, and after that peak reached in 2021, the strong performance of the Spanish economy and the inflationary process have reduced this ratio, due to the rapid growth of nominal GDP, which represented 105.4% of GDP at the close of Q1 2024. In any case, the ratio is still high, surpassing its long-term average, which raises concerns about its cost and sustainability once the ECB's asset purchasing programs are scaled back. This has led the European Commission to recommend reducing Spain's public deficit, as it has done for other countries in the Eurozone.

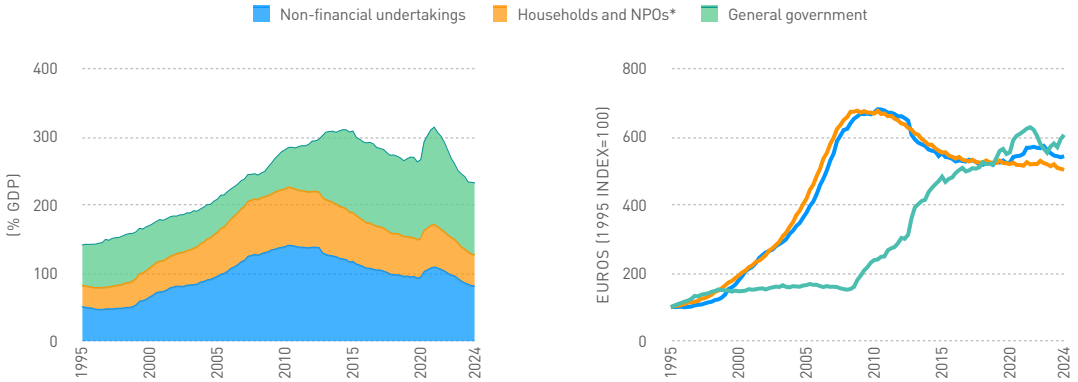
Private sector lending and banking penetration level

Another noteworthy aspect is that the banking sector of the Spanish economy has traditionally been highly developed, even by the standards of other advanced economies, as reflected in the weight of bank lending in the composition of total private sector lending (households and companies), as shown in the aforementioned Chart 1.3.5. However, the two great financial crises of 2008 (global) and 2012 (Eurozone) significantly altered this composition. From its peak of 81.9% at the end of 1998, it dropped to 59.7% at the close of 2023. This means that the use of non-bank lending has increased substantially, to 40.3% of credit to the non-financial private sector.

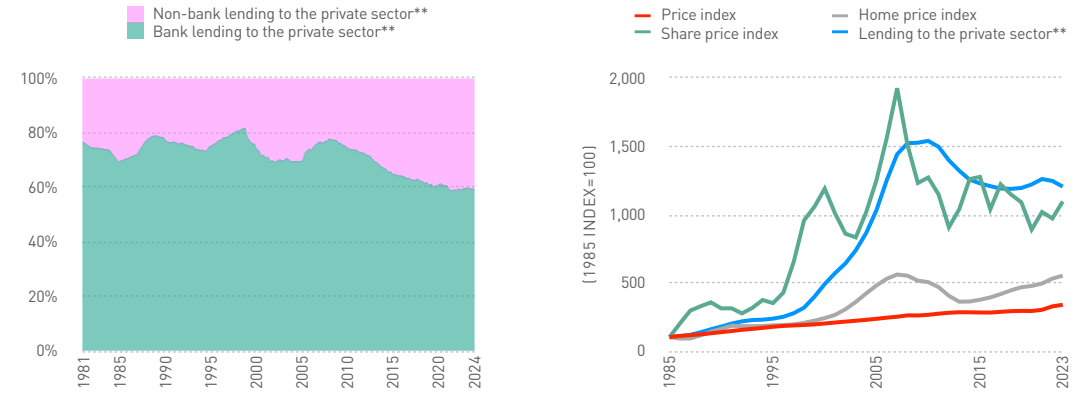
Meanwhile, Chart 1.3.5 offers a comparative view of the evolution of private sector lending and other economic indicators, which are indirectly related to insurance activity through amounts insured and investment portfolios. In this regard, the valuation trends of both housing prices and, to a greater degree, equities, are noteworthy, as they remain aligned with the trajectory of private sector lending. From a risk management perspective, it is significant that at the start of this century and in 2007, Spanish equities experienced sudden corrections that were greater than those of real estate assets and other international indexes (Chart 1.3.5-b).

Chart 1.3.5
Spain: evolution of lending activity

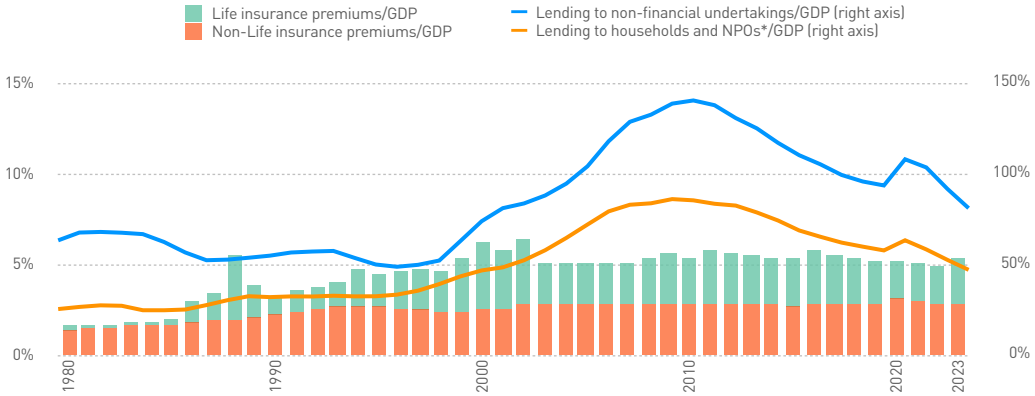
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

Insurance activity and components of private sector lending

To supplement this analysis, the aforementioned Chart 1.3.5 compares the dynamics of credit and insurance activity in Spain, showing the performance of the components of household and company credit compared with the insurance industry's premium volume, in both the Life and the Non-Life insurance segments, with all indicators expressed as a percentage of GDP (Chart 1.3.5-c). It is evident that the behavior of insurance premiums in the Spanish market in the years before Spain joined the Eurozone followed a similar path to that of household credit, as observed in other developed markets. However, since then, in the years before and after the global crisis of 2008 (originating in the real estate market), it diverged from that path, recovering again after the Eurozone sovereign credit crisis, with a downward trajectory in both cases, much more pronounced in the case of household credit than insurance activity.

1.3.6 Germany

The evolution of German credit presents singular characteristics that differentiate its credit profile from those of other advanced economies. German credit activity is noteworthy for its stability and the greater balance among its three main components. This differs from the other cases analyzed in this report, as neither the composition of credit nor the relative weight of the three major components of credit to the non-financial sector (public and private) with respect to GDP have changed much. This was even the case during the 2008 global financial crisis and the 2012 sovereign credit crisis in the Eurozone, which mainly affected the peripheral countries of the region.

Evolution of credit by component

Chart 1.3.6 presents a historical series, since 1998, showing the evolution of credit to the non-financial sector as a percentage of German GDP. At the close of 2023, these three major credit components (government, households, and companies) represented 59.8%, 51.3%, and 69.1% of GDP, respectively. This means total credit to the non-financial sector on that date represented 180.2% of German GDP, versus 188.2% at the end of 1998 (Chart 1.3.6-a). The stability of these levels reflects a well-regulated credit market, where companies and households access credit without creating high debt levels relative to the size of the economy. The analysis of credit in Germany reveals stable and moderate performance across all sectors, with a prudent focus on credit management, both private and public. This focus has allowed the German economy to resist external shocks and maintain its macroeconomic stability.

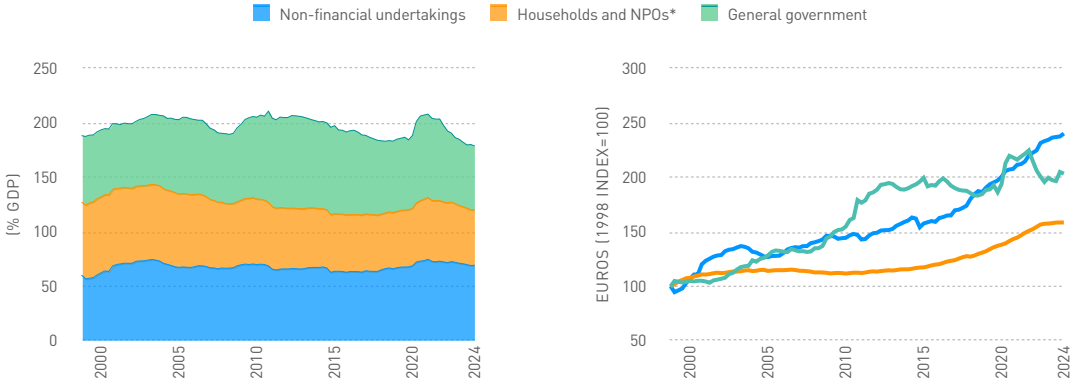
The aforementioned Chart 1.3.6 also shows the evolution of the three major credit components in euros, measured at an index of 1998=100. Private lending to non-financial companies showed the greatest dynamism in the 1998-2023 period, reaching 69.1% of GDP, a level comparable to other advanced economies. Meanwhile, general government and household credit remained well below the levels reached in other developed countries, such as the United States, United Kingdom, and Japan. Thus, public sector lending has remained at the same levels it presented in 1998, around 60%, reaching its maximum of 84.9% during the Eurozone sovereign credit crisis. This was driven mainly by expansionary fiscal policies implemented in response to that financial crisis and, later, to the COVID-19 pandemic.

Private sector lending and banking penetration level

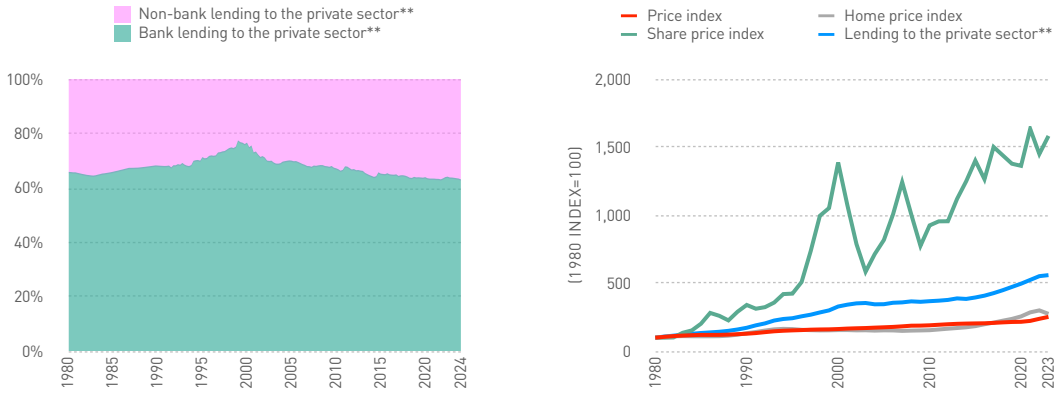
Another distinctive trait of the German credit market is its high degree of bank penetration, exceeding that of other advanced economies. This is reflected in the weight of bank lending, at 63.5% of total private sector lending (households and companies) at the close of 2023, consistent with its trend over the last four decades (Chart 1.3.6-b). This contrasts, for example, with the 32.6% weight of bank lending in the United States, indicating a much

Chart 1.3.6
Germany: evolution of lending activity

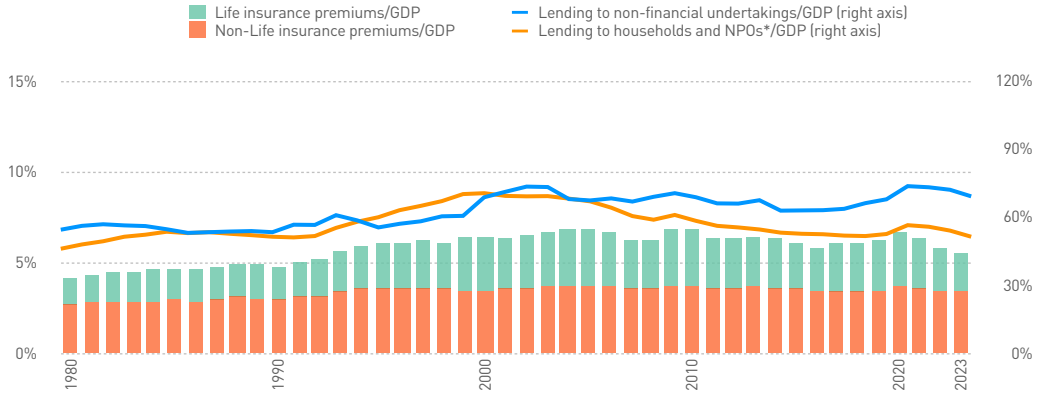
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)

**Lending to households and undertakings

lower reliance on non-bank lending in Germany, where banks remain the main source of private sector lending. In addition, the use of the euro as the main source of credit has allowed it to maintain low exposure to exchange rate risk and fluctuations in the global markets, a critical aspect for internal financial stability.

Chart 1.3.6 also offers a comparative view of the evolution of private sector lending and other economic indicators which are indirectly related to insurance activity. The significant growth in the valuation of equities, far surpassing the increase in housing values and the general consumer price index, is noteworthy. However, from the point of view of risk management, it should be noted that in the early 2000s and in 2007, German equities experienced abrupt corrections greater than those of real estate assets, which grew to a much lesser extent, following a path more aligned with the evolution of private sector lending and general consumer prices.

Insurance activity and components of private sector lending

Finally, the performance of the components of household and company credit compared with the insurance industry's premium volume is analyzed to compare the dynamics of credit and insurance activity in both Life and Non-Life insurance, with all indicators expressed as a percentage of GDP (Chart 1.3.6-c). Analyzing its evolution, the behavior of insurance premiums in the German market follows the path of private sector lending (both measured as a percentage of GDP), throughout the series analyzed, mainly in reference to household credit and, to a lesser degree, credit to the non-financial corporate sector.

1.3.7 Turkey

Over the past twenty years, Turkey has generally used credit as a central tool to drive economic growth, especially in infrastructure and corporate expansion projects.

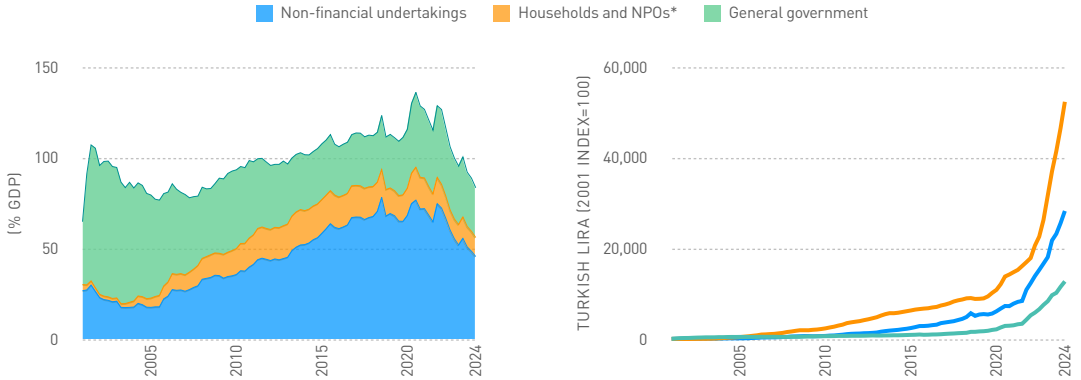
Evolution of credit by component

As Chart 1.3.7 shows, a historical series since 2001 presents the evolution of credit to the non-financial sector as a percentage of GDP, broken down into the three main components of general credit (to the government, households and other non-financial entities, and non-financial companies). At the close of 2023, these three major components represented 29.3%, 11.0%, and 48.5% of GDP, respectively. Credit to companies is the main component, unlike in more developed countries, where public sector lending carries the greatest weight (Chart 1.3.7-a). The analysis of the evolution of the three major credit components in Turkish liras, indexed to 2001=100, reveals a strong increase in private sector lending, which includes lending to both households and non-financial companies. The rapid growth of household credit is notable, although its weight remains low in relation to credit to companies and the public sector. In terms of public lending, government debt has increased rapidly, following a path that raises concerns in a context of high inflation rates and fiscal restrictions. The policies of the Central Bank of Turkey have been fundamental to the attempt to stabilize access to credit, although the frequent intervention of the exchange markets has created additional uncertainty.

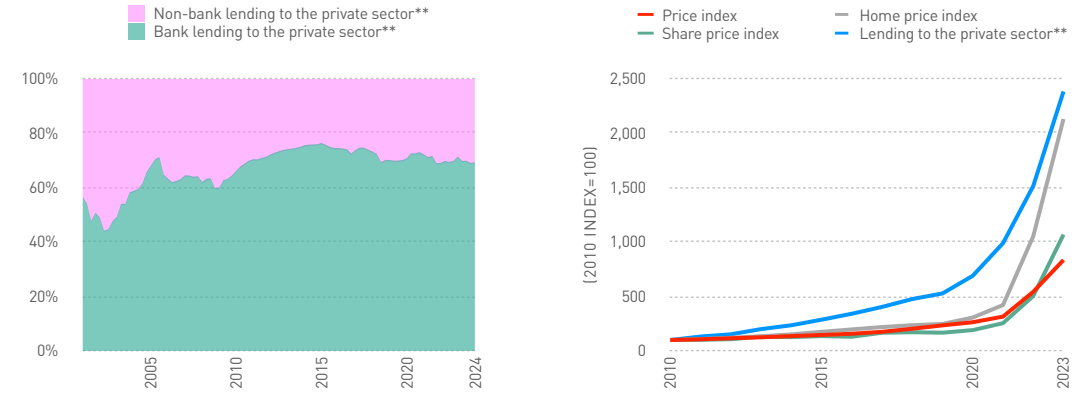
It should also be noted that this significant increase is largely a monetary phenomenon, due to high inflation rates. If measured in relative terms, as a proportion of nominal GDP, the increase has been less significant. Thus, total credit to the non-financial sector (public and private) on that date represented 88.8% of GDP, versus 64.1% in 2001. Turkish companies, in particular, have frequently resorted to foreign lending, issued in dollars and euros, to finance large projects. This external debt has led to an increase in the credit burden in foreign currency, which makes them vulnerable to the depreciation of the lira, exacerbating economic tensions during periods of high exchange rate volatility.

Chart 1.3.7
Turkey: evolution of lending activity

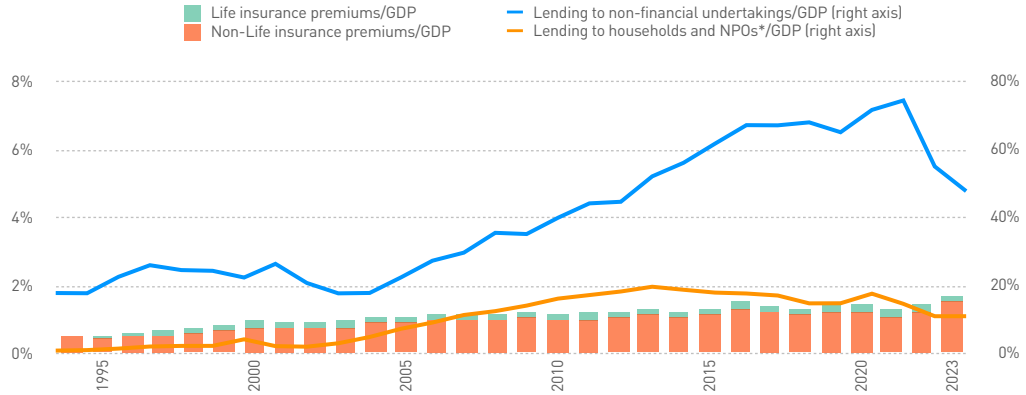
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

Private sector lending and banking penetration level

In Turkey, the majority of non-financial private sector lending (households and companies) comes from the banking sector, representing 69.0% of total non-financial private sector lending at the close of 2023. This exceeds non-bank lending, which represented only 31.0%, substantially lower than in the most developed economies with more advanced capital markets, such as the United States and United Kingdom. Meanwhile, the aforementioned Chart 1.3.7 offers a comparative view of the evolution of private sector lending and other economic indicators which are indirectly related to insurance activity, through amounts insured and investment portfolios. Notably, housing values have seen significant growth, which aligns more closely with the evolution of private sector lending, and is much higher in Turkey than the increase in the general consumer price index and equities (Chart 1.3.7-b).

Insurance activity and components of private sector lending

The performance of the components of household and company credit compared with the insurance industry's premium volume was reviewed to compare the dynamics of Turkey's credit and insurance activity in both the Life and the Non-Life insurance segments (with all indicators expressed as a percentage of GDP). As the analysis shows, in the case of Turkey, except in some specific periods before the 2008 global financial crisis, when they followed the upward trend of household credit, the cited indicators have not appeared to follow similar patterns of behavior, as opposed to what happens in other emerging and developing economies (Chart 1.3.7-c).

1.3.8 Japan

Japan exhibits unique behavior in the evolution of credit, with characteristics that set it apart from other advanced economies. This reflects the particularities of a country that has faced multiple financial and economic crises since the real estate and stock market bubble burst in the 1990s. Since then, Japan has maintained very high debt levels, especially in the public sector, due to expansionary government policies aimed at reactivating the economy.

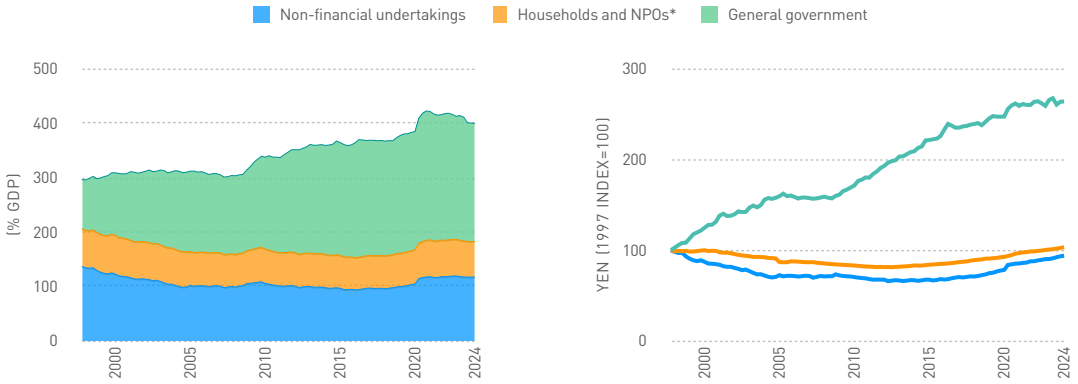
Evolution of credit by component

Chart 1.3.8 shows a historical series since 1997 of the evolution of credit as a percentage of Japan's GDP, broken down into its three major components: credit to governments (federal, state, and local), households (and other non-profit organizations), and companies (non-financial). According to this data, at the close of 2023, these three major components represented 217.8%, 65.2%, and 117.2% of GDP, respectively. This means total credit to the non-financial sector on that date represented 400.1% of GDP, which contrasts with that of other developed countries (for example, the United States at 256.3%). Thus, the evolution of the three major credit components in local currency, measured at an index of 1997=100, reveals the strong dynamism of public sector lending (Chart 1.3.8-a). The expansionary fiscal policies, along with the continuous intervention of the Bank of Japan since the 1990s crisis, left Japan with a legacy of growing public debt and an economy that has fought to maintain sustained growth. While this has allowed the country to maintain financial stability, it has come at the cost of rising public debt.

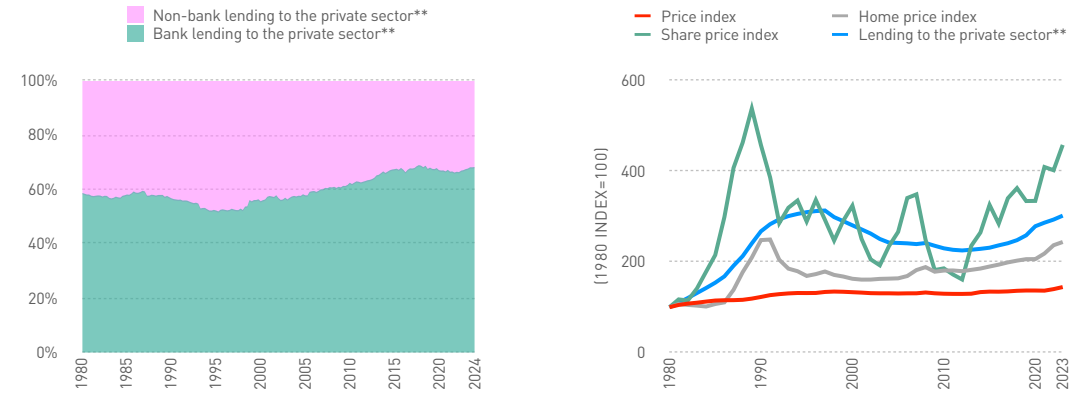
Credit use in the private sector, however, has been more contained, even declining during long periods. Many companies, for example, opted to reduce their leverage after the crisis. All in all, Japan remains a highly indebted economy but has managed to maintain financial stability through careful management of monetary and fiscal policy over a prolonged period of economic stagnation. The Bank of Japan's expansionary monetary policy, with near-zero interest rates and quantitative easing (QE) policies, has kept credit available, but not the demand for private lending, which has remained at the same levels for the last thirty years.

Chart 1.3.8
Japan: evolution of lending activity

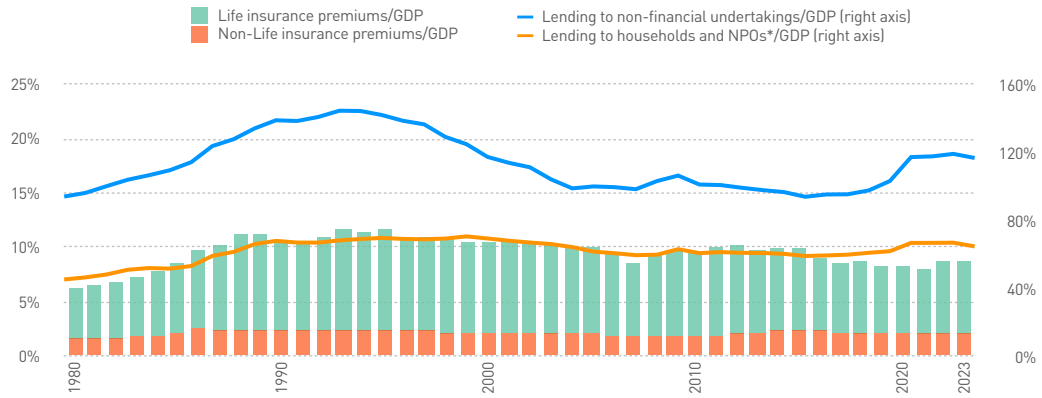
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

Private sector lending and banking penetration level

The Japanese credit market currently presents a relatively high rate of bank penetration, which is reflected in the weight of bank lending in the composition of private sector lending (households and companies). In 2023, bank lending represented 68.0% of total private sector lending, while non-bank private lending made up 32.0% (Chart 1.3.8-b). Unlike in other developed markets, the weight of bank lending in Japan has been growing since the real estate crisis in the mid-1990s. The aforementioned Chart 1.3.8 also offers a comparative view of the evolution of private sector lending and other economic indicators which are indirectly related to insurance activity. The strong correction in housing values since the crisis of the 1990s is worth mentioning, as it also affected equities, which experienced sudden corrections that surpassed those of real estate assets. Both indicators have followed a path aligned with the evolution of private sector lending.

Insurance activity and components of private sector lending

Finally, Chart 1.3.8 compares the dynamics of Japan's credit and insurance activity, showing the performance of the components of household and company credit compared with the insurance industry's premium volume, in both the Life and the Non-Life insurance segments, with all indicators expressed as a percentage of GDP. This information reveals that insurance premiums in the Japanese market followed the trend of private sector lending (both measured as a percentage of GDP) across all periods analyzed. This includes both household lending and non-financial corporate lending. The only exception occurred in the last four years, where nominal GDP experienced strong contractions and expansions as a result of the economic crisis brought on by the COVID-19 pandemic. This shift affected these indicators to varying degrees (Chart 1.3.8-c).

1.3.9 South Korea

South Korea has developed a solid and stable credit system, which has played a key role in its export-based economic growth model. Private lending, especially to the large corporations, is one of the distinctive characteristics of the South Korean financial system. These companies use credit to finance their organic expansion, acquisitions, and R&D projects, consolidating the country's position as a leader in technology and manufacturing. In addition, government policies have promoted access to credit for small and medium enterprises. Meanwhile, household credit also holds significant weight in the economy, driven by a boom in the real estate market and higher real estate prices in urban areas, like Seoul. Thus, mortgages represent a significant part of household indebtedness, although the government has implemented strict regulations to avoid real estate bubbles and maintain the stability of the financial system.

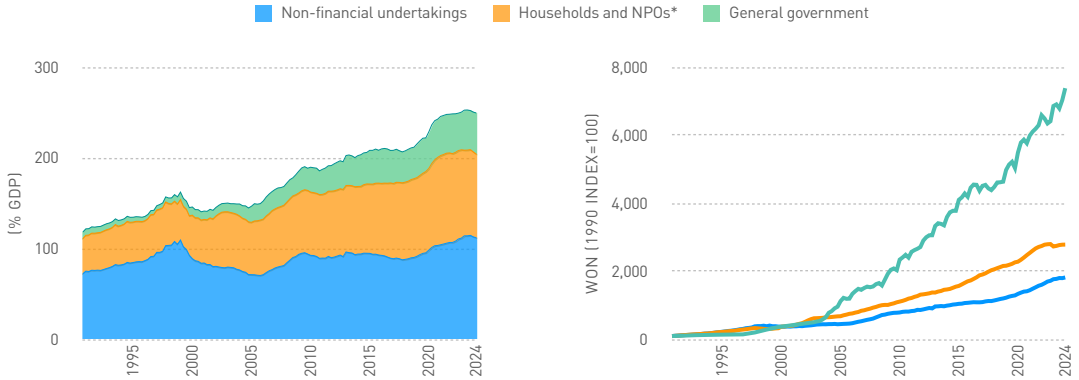
Evolution of credit by component

Chart 1.3.9 shows a historical series since 1990 of the evolution of credit as a percentage of GDP in South Korea, broken down into its three major components: credit to the government, to households (and other non-profit organizations), and to companies (non-financial). According to this data, at the close of 2023, the weight of these three major components was 44.0%, 93.6%, and 113.0% of GDP, respectively (Chart 1.3.9-a). This means total credit to the non-financial sector on that date represented 250.6% of Korean GDP, versus 119.0% in 1990. The most important feature of South Korea's credit composition is the relatively small share of public sector lending, substantially lower than that of other developed economies.

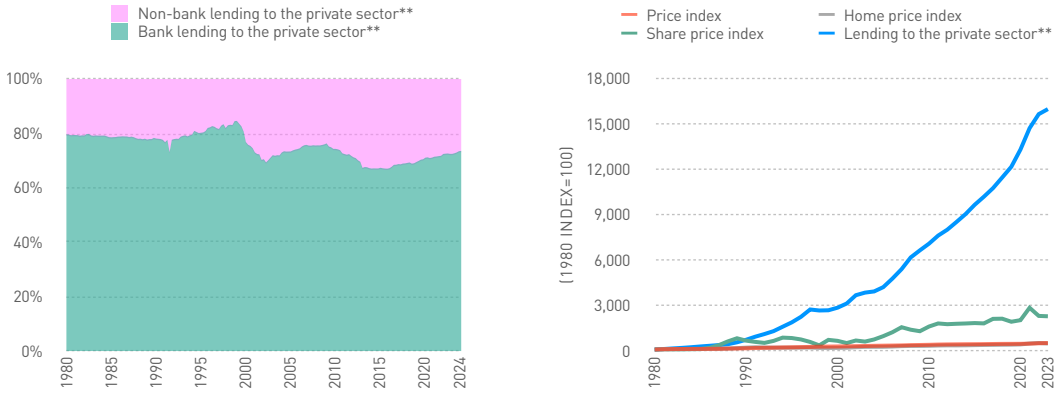
The analysis of the evolution of the three major credit components, measured at an index of 1990=100, reveals the strong dynamism of all of them, particularly public sector lending as of the start of this century,

Chart 1.3.9
South Korea: evolution of lending activity

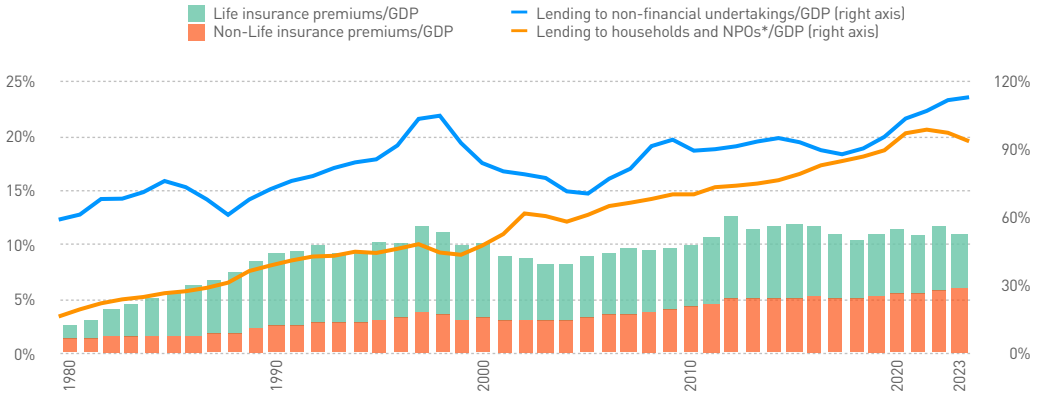
a) Evolution of lending by components



b) Lending to the private sector



c) Insurance premiums vs lending to the private sector (% GDP)



Source: MAPFRE Economics (based on data from BIS, Oxford Economics/Haver Analytics and Swiss Re)

*NPOs (non-profit organizations; non-profit institutions that provide services to households)
**Lending to households and undertakings

which, however, still has a relatively low weight when compared to non-financial private sector lending. Thus, the private sector leads in the accumulation of credit, reaching current levels of 204.2% of GDP in Q1 2024. This figure includes credit to both non-financial companies and households. It is noteworthy that lending in local currency (the won) dominates the South Korean financial system, which has helped the country mitigate risks associated with exchange rate fluctuations. However, South Korea also maintains a significant presence in the international financial markets, using dollar-denominated credit to finance strategic projects and commercial operations.

Private sector lending and banking penetration level

The South Korean credit market currently has a high level of bank penetration, which is reflected in the weight of bank lending in the composition of private sector lending (households and companies), which stood at 73.4% in 2023, while non-bank private lending accounted for 26.6%. Although this percentage increased in the late 1990s, it currently presents levels similar to those in the early 2000s. Additionally, Chart 1.3.9 offers a comparative view of the evolution of private sector lending and other economic indicators which are indirectly related to insurance activity (through amounts insured and investment portfolios). In this regard, the performance of housing prices stands out, aligned with the general price index due to the aforementioned policies. Housing price growth has been lower than that of equities, and both have diverged from the trend of private sector lending and are more in line with South Korea's extraordinary economic growth during this period (Chart 1.3.9-b).

Insurance activity and components of private sector lending

Finally, the performance of the components of household and company credit compared with South Korea's insurance industry's premium volume are analyzed to compare the dynamics of credit and insurance activity in both the Life and Non-Life segments, with all indicators expressed as a percentage of GDP (Chart 1.3.9-c). It is evident that insurance premiums in South Korea followed the path of private sector lending (both measured as a percentage of GDP) for both non-financial corporate and household credit up until 2018, after which they seem to have embarked on diverging paths.

2. Capital market development and its effects on credit activity

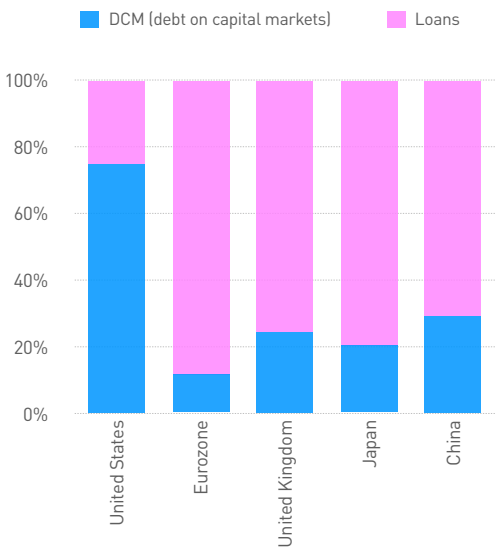
2.1 Bank credit and alternative financing channels

The development of capital markets plays a crucial role in enabling various economic agents (governments, households, and companies) to access financing. In this area, bank financing intermediaries often play a leading role, as demonstrated in the specific analysis of the countries selected for the purposes of this study. Currently, loan origination is a fundamental process through which lending institutions assess and grant loans, mainly to households and companies. For governments and large companies, in addition to the bank channel, there is also the option of directly issuing securities in the capital market, facilitating the financing of large infrastructure and development projects that improve overall economic productivity and create jobs, establishing a solid base for long-term economic growth.

The differences in how financing is obtained through the capital markets are largely influenced by cultural idiosyncrasies, the degree of development of a country's financial structures, and the establishment of economic and fiscal policies aimed at improving the infrastructure of these markets. This development level influences bank dependence, particularly among small and medium enterprises (SMEs), which face greater barriers to accessing the securities markets compared to larger companies (see Chart 2.1-a).[1]

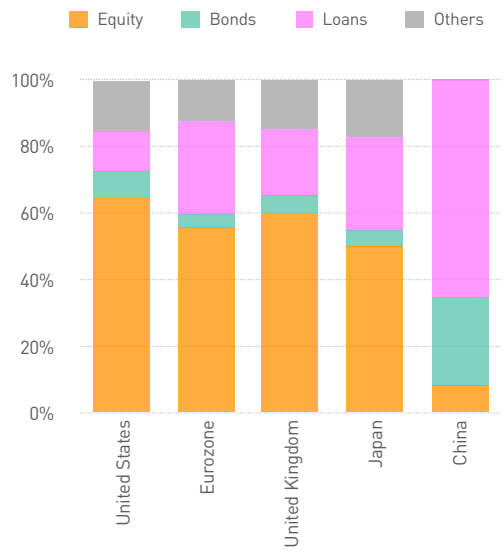
In bank-based systems, banks assess and assume the borrowers' risk, being the predominant source of financing, as is the case in most of the world's economies. The United States is the major exception, with a credit system more focused on capital markets, where a large part of business financing comes directly from the financial markets. The well-developed capital market in the United States allow businesses to raise capital by issuing both stocks and bonds on the primary market, with a deep secondary market that facilitates its liquidity, reducing dependence on banks by diversifying financing sources, which helps mitigate concentration risks. For example, in the United States, around 70-80% of business financing is obtained through these markets, while in Europe, bank credit is still one of the predominant channels. However, there is currently an initiative to promote the European Union's Capital Markets Union in order to reduce bank dependence. Meanwhile, the advanced state of the U.S. capital market is also facilitating the global integration of financial markets, connecting

Chart 2.1-a
Selected economies: structure of financing sources
(%)



Source: MAPFRE Economics (based on SIFMA data)

Chart 2.1-b
Selected economies: types of financing sources
(%)



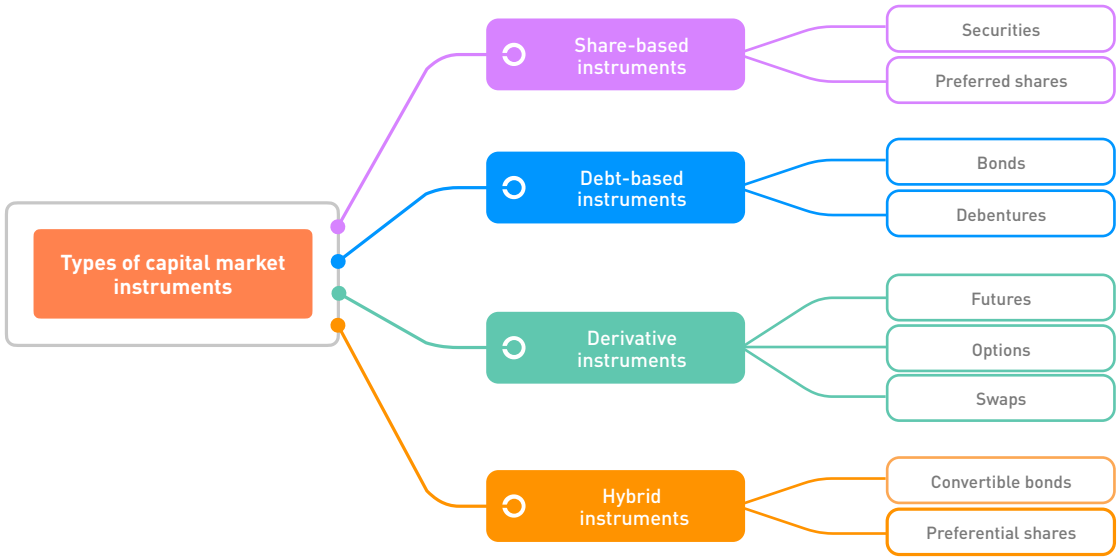
Source: MAPFRE Economics (based on SIFMA data)

investors worldwide in both the primary and secondary markets. The only limiting factor is risk management, including exchange rate risk (see Chart 2.1-b).

In bank-based financial systems, such as those of Europe, banking entities are the main intermediaries that convert deposits into loans, assessing borrower risks and assuming these risks on their balance sheets. Thus, in countries like Germany, France, Italy, and Spain, bank penetration has been the focus of financing, especially for SMEs and sectors such as real estate. In contrast, the United States has developed a financial infrastructure that allows not only governments and large companies but also smaller actors and retail investors to access the capital market. It should be noted that access to financing through capital markets includes a broad variety of financial instruments (see Chart 2.1-c).

Capital-based instruments, like *stocks*, grant ownership rights to investors, who benefit from dividends and stock value appreciation, where applicable, although they face the risk of potential losses. These instruments are essential to finance company growth, particularly in highly innovative sectors. Preferred shares, on the other hand, combine the characteristics of capital and debt, offering investors an additional return through cash flows known

Chart 2.1-c
Types of capital market instruments



Source: International Monetary Fund

as dividends, but granting the right to vote. In addition, financial markets offer hybrid instruments, such as *convertible bonds*, which combine the characteristics of capital and debt. Convertible bonds, for example, can be converted into stocks by investors or issuers under certain conditions, providing flexibility for both parties.

Credit instruments, such as *bonds* and *obligations*, allow companies and governments to raise funds, promising to repay them with interest over a determined term. For example, governments, companies, and municipal entities can issue bonds to finance specific projects. Obligations, while similar, are often unsecured instruments, which makes them more dependent on the issuer's solvency.

Modern financial markets also include derivatives and exotic or complex products, such as *options* and *futures*, which are essential to risk management and providing certain flexibility. Options allow investors to agree on a future purchase or sale price for an asset, while futures bind the parties to complete the transaction on an agreed date in the future. These instruments are crucial for hedging against price fluctuations in commodities, currencies, and financial assets, thereby improving market stability.

Finally, it is notable that, since the 2008 financial crisis, non-bank financing (also known as *"shadow banking"*) has become an important alternative to traditional credit, allowing large institutional investors, like investment funds, pension funds, insurers, and crowdfunding platforms, to acquire securities and channel resources into the real economy through products such as collateralized loan obligations (CLOs) and securitization. These instruments play a significant role in the financial system, as they enable loan originators to mobilize credit, increasing their capacity to continue offering credit without compromising their stability.

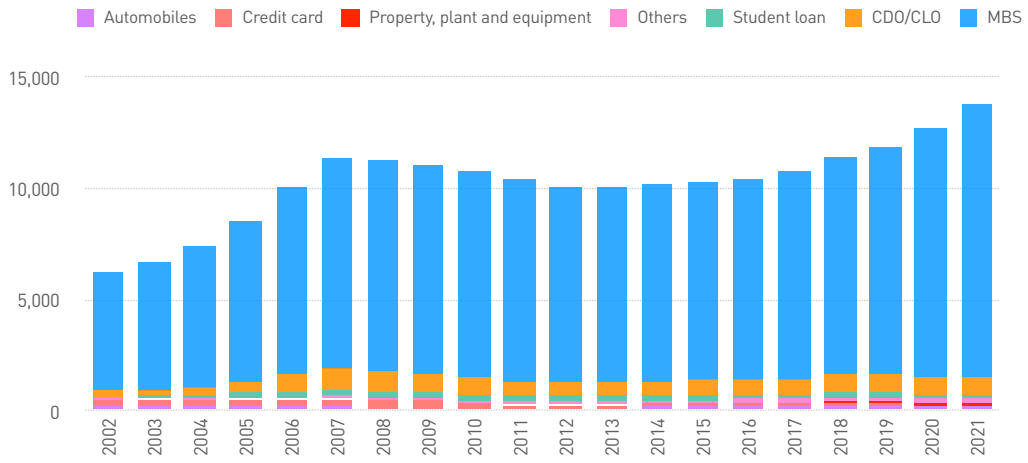
2.2 Securitization as a means of credit expansion

Securitization is a process through which banks are permitted to convert loans into negotiable instruments, facilitating their sale to investors. Through this process, banks can free up their capital and generate liquidity, enabling them to extend more credit, increase investment, improve access for new investors through capital markets, thereby diversifying their funding sources.

The identification and pooling of assets in securitization allows banks to transform illiquid assets that generate periodic income—such as mortgages, consumer loans, and loans to public entities—into negotiable instruments. These assets are selected based on key criteria (predictable cash flows, homogeneity in traits such as loan type, terms, and risk level, among others), as well as a history of low delinquency, factors that all generate a relatively attractive product for investors.

In the securitization process, the bank creates a special purpose vehicle (SPV) that consists of an independent entity to house these assets and to issue the securities they back. This structure enables the loan originator bank to keep the assets off its balance sheet and to enjoy certain benefits: (i) *risk isolation* (the assets transferred to the SPV are protected from the bank's financial risk and vice versa); (ii) *reduction of capital requirements* (the bank improves its capital ratios, freeing up resources for other loans); and (iii) *issuing of securities* (the SPV can issue securities backed by the assets, offering a secure and attractive structure for investors; the transfer of assets to the SPV allows the bank to separate its risks, and through "non-recourse" and bankruptcy protection clauses, the assets are safeguarded if the bank encounters financial problems).

Chart 2.2-a
United States: securitizations
(billions of USD)



Source: MAPFRE Economics (based on SIFMA data)

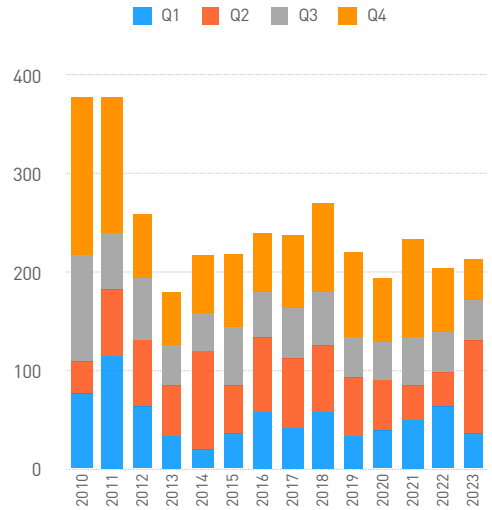
In the structuring of these securities, "pooling" is another characteristic of the process, which consists of generating groups by risk level, diversifying them and allowing access to investors with different profiles and needs. As a guarantee, and before they are issued, these tranches are evaluated by rating agencies. This evaluation helps investors determine how to align these products with their needs to maximize the risk-return trade-off. At the same time, securitization allows banks to optimize their capital costs, as their debt is not increased directly on their balance sheet.

After securitization, while the assets (loans) are transferred to an SPV, the bank or a management entity often continues to manage these assets, collecting payments from borrowers and receiving a fee for this work. This allows the bank to maintain additional income and preserve its relationship with borrowers. To ensure payment to the priority tranches, the SPV often implements certain credit improvements: (i) *cash reserves* (additional funds that cover possible deficits); (ii) *over-collateralization* (asset value higher than the total of securities issued, creating a protective "cushion"); and (iii) *tranche subordination* (any losses are first absorbed by the *junior* tranche, then the *mezzanine*, and finally the *senior* tranche).

In the United States, securitization has been dominated by mortgage-backed securities (MBS), particularly those issued by government agencies like Fannie Mae and Freddie Mac. In 2021 (last available data), total issuing of fixed income securities in the United States reached 13.4 billion dollars, with MBS representing a majority share. Although investment in asset-backed securities (ABS) has been lower, these products have still been a key tool to finance assets like student loans, auto loans, and credit cards (see Chart 2.2-a).

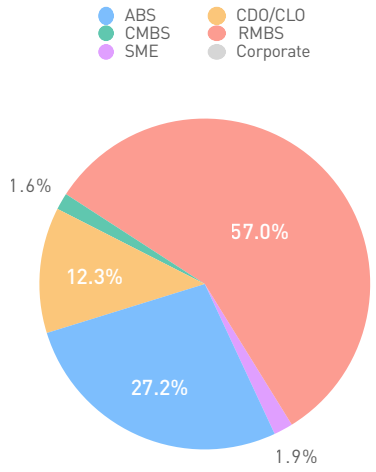
In European terms, securitized products include asset-backed (ABS), residential mortgage-backed (RMBS), and commercial-backed (CMBS) securities, loans to SMEs and corporate bonds. According to data from the Association for Financial Markets in Europe (AFME), securitization issuing peaked in 2008, exceeding 400 billion euros, driven mainly by the real estate boom. The composition of the securitized products in Europe has also evolved over time. Approximately 51.7% of bonds issued are backed by residential mortgages (RMBS),

Chart 2.2-b
Europe: issuing of securitized products
(millions of euros)



Source: MAPFRE Economics (based on AFME data)

Chart 2.2-c
Europe: issuing structure of covered bonds by type of collateral



Source: MAPFRE Economics (based on AFME data)

while 16.6% are corporate loans, and the rest include other assets, like consumer loans and loans to SMEs. This scenario highlights the importance of securitization in financing key sectors of the economy, while reflecting the need to adequately manage the risk associated with these products (see Charts 2.2-b and 2.2-c).

To put this in context, until 2008, securitization in Europe, and particularly in Spain, grew significantly, driven by the expansion of the real estate market and bank strategies to reduce their balance sheets. Banks issued asset-backed securities (ABS and MBS) to attract foreign investors and diversify their sources of financing without depending on deposits. This allowed them to improve their capital structure by transferring the securitized assets off their balance sheets, thereby reducing capital requirements under Basel II regulations.[2]

However, this practice created an incentive for a "moral hazard," as some banks relaxed their credit approval criteria, transferring the risk to the securities buyers. The 2008 financial crisis exposed the vulnerabilities of these products, especially those linked to subprime mortgages in the United States, causing a drop in confidence and in liquidity. This had a severe effect on European banks and, particularly, Spanish banks, restricting their financing and contributing to the real estate and banking crisis in that country.

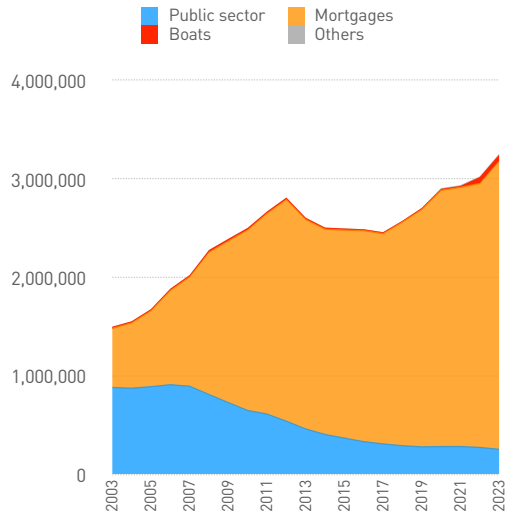
In Europe, the crisis led to a mass loss in value of the securitized products, drastically reducing demand. The lack of transparency and complexity of these products increased risk aversion. In response, stricter regulations were introduced, like Basel III and the provisions of the European Banking Authority (EBA), which raised capital requirements and demanded that banks retain part of the risk. This also led to a substantial increase in the capital requirements for European insurance companies investing in these types of securities under the Solvency II system, which have subsequently been reduced for categories that meet certain eligibility requirements based on their lower risk.[3]

In addition, the European financial market presents a particularity known as *covered bonds*. These are credit instruments used widely in Europe, backed by a specific set of assets (mainly mortgages and, to a lesser degree, public sector loans), that offer investors a double guarantee: that of the issuer and that of the asset *pool* that acts as collateral. This becomes a secure and efficient tool for capturing capital market resources. Globally, Europe leads in both the issuing and outstanding balance of *covered bonds*. According to data from the European Covered Bond Council (ECBC), in 2023, the total balance of these instruments reached 3.26 trillion euros. Most *covered bonds* are linked to mortgages, representing about 90% of collateral assets; the rest are mainly public sector loans, emphasizing the diversification these bonds offer to investors (see Chart 2.2-d).

In terms of countries, France is the global leader, with an outstanding balance of 468.5 billion euros, followed by Denmark and Germany, with 465.3 and 400.3 billion euros, respectively. These countries have consolidated their *covered bond* markets as a pillar of real estate financing, permitting banks to offer mortgages at competitive rates and long terms. In particular, Spain holds fifth place in that ranking with an outstanding balance of 214.9 billion euros, reflecting its dependence on these instruments to finance the real estate sector, particularly during the boom prior to the 2008 crisis (see Chart 2.2-e).

Since 2003, the total balance of *covered bonds* has grown steadily, with a slight slowdown after the 2008 financial crisis. This decline was due to the decreased confidence of investors and regulatory adjustments implemented to strengthen the transparency and quality of the underlying assets. However, since 2015, the issuing of these instruments has again gained traction, driven by the demand for secure products and the need of the banks to diversify their sources of financing. This structure makes them attractive to a broad

Chart 2.2-d
Europe: covered bond balance
(millions of euros)

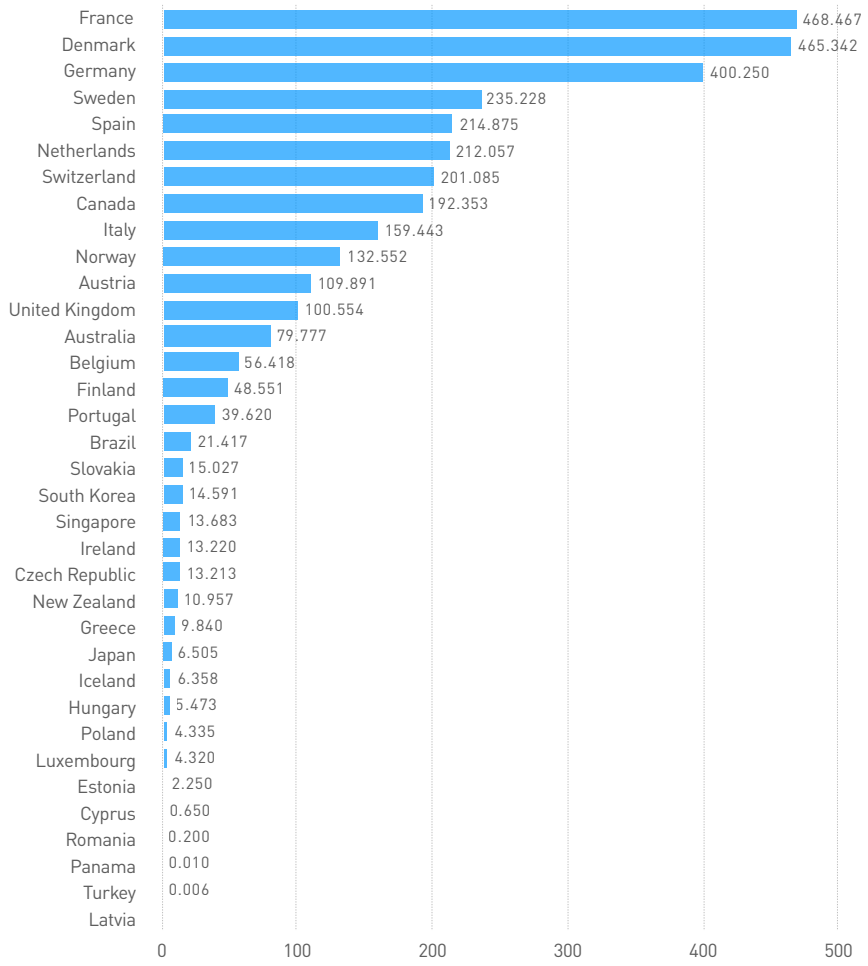


Source: MAPFRE Economics (based on data from the European Covered Bond Council, ECBC)

range of institutional investors, such as insurance companies and pension funds, which seek low-risk products and stable returns. As opposed to other securitization instruments, the underlying assets remain on the issuer's balance sheet, which means investors have access to two levels of protection: (i) cash flows generated by the asset *pool*, and (ii) the backing of the issuer.

The importance of *covered bonds* in Europe also lies in their role as an economic policy tool. At times of financial stress, central banks in Europe, including the European Central Bank (ECB), have used these instruments as part of their asset purchase programs. This has not only helped them maintain liquidity in the markets, but has also reduced the cost of mortgage loans and stimulated investment in the real estate sector. European Union directives demand strict quality criteria for collateral assets, high levels of transparency, and protection for investors. This approach has allowed *covered bonds* to maintain their position as one of the most secure and reliable instruments in the financial system.

Chart 2.2-e
Selected countries: covered bond balance, 2023
(billions of euros)



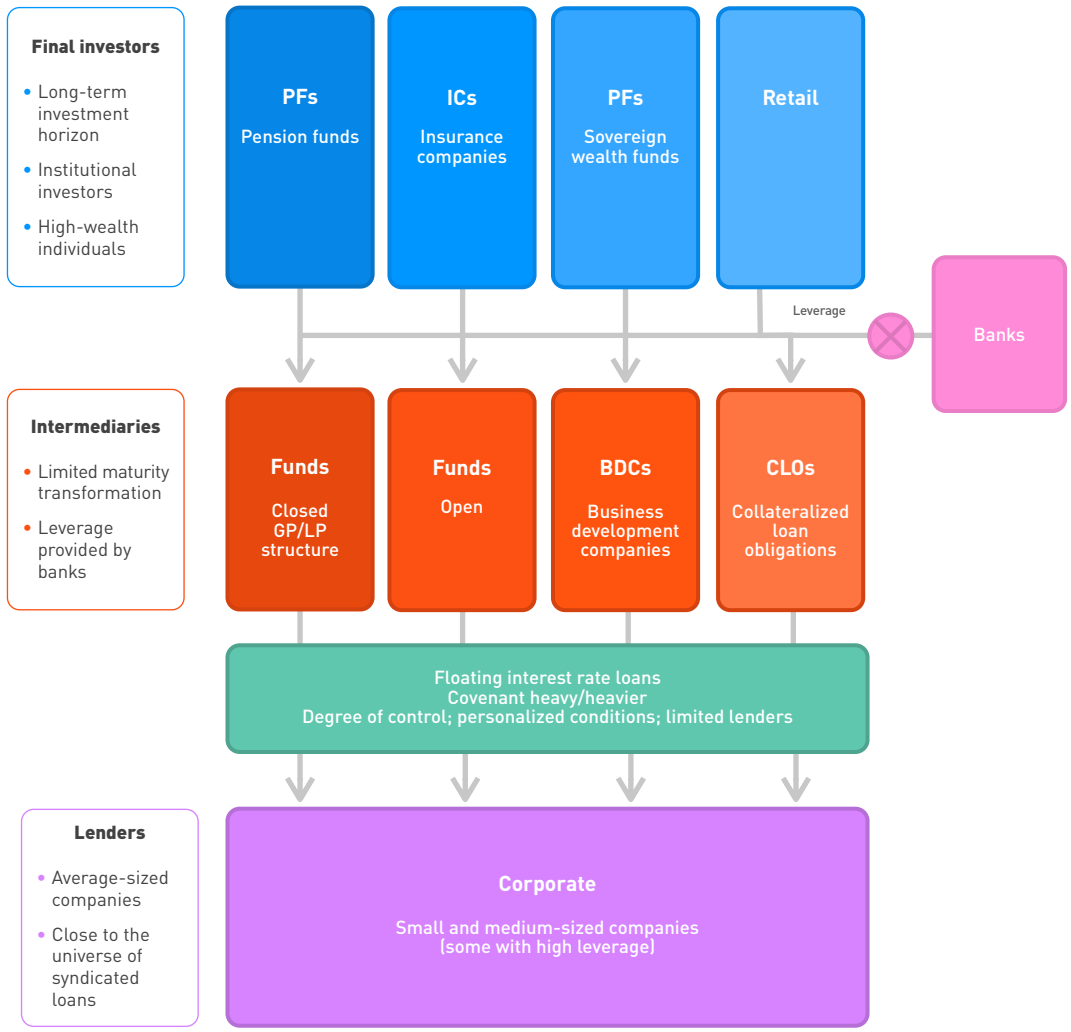
Source: MAPFRE Economics (based on data from the European Covered Bond Council, ECBC)

In summary, compared to other credit instruments, *covered bonds* play a noteworthy role in developed economies with consolidated mortgage systems. While mortgage-backed securities (MBS) issued by government agencies are predominant in the United States and the United Kingdom, in the European Union, *covered bonds* offer a more structured and regulated alternative. These bonds carry less risk related to asset quality and market structure, resulting in lower regulatory capital requirements, particularly for insurance company investors. As the global *covered bonds* market continues to evolve, its growth potential in emerging economies is a key opportunity. Countries like Brazil, China, and Mexico are exploring the adoption of regulatory frameworks similar to Europe's, which could expand the use of these instruments significantly to finance critical infrastructure and real estate projects.

2.3 Private debt and capital markets

A significant component of the non-bank financing system for SMEs is *private equity,* along with the related concept of *private debt*, which connects institutional investors, such as pension funds and insurance companies, with companies looking for capital to grow. This investment model is especially relevant for startups, growing companies, and strategic sectors like technology and renewable energy. *Private equity* and *private debt* provide not only financing, but also strategic experience and resource management, which could improve the productivity and competitiveness of receiving companies and their rapid growth if their business model operates in the market. In addition, strategies like venture capital and leveraged buyouts permit financing from early phases through business restructuring processes. Because of its characteristics, private equity often reduces the cost of financing, and therefore is more profitable for companies in the long

Chart 2.3
Private debt market



Source: International Monetary Fund
GP = general partners; LP = limited partners

term compared to debt issuing, so it is an alternative explored by both small and medium-sized companies (see Chart 2.3).

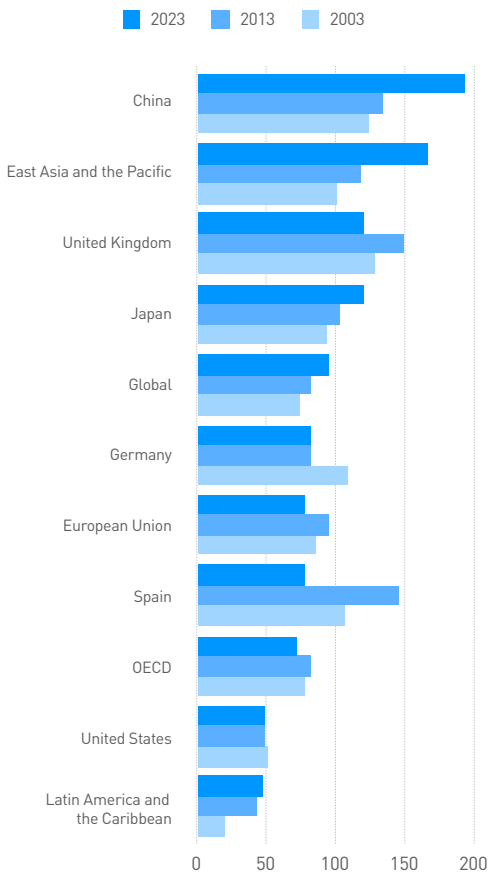
2.4 The Capital Markets Union in the European Union

As discussed in the previous sections, the European financial system is characterized by its heavy dependence on bank lending. At the close of Q1 2024, private sector lending (households and companies) in the Eurozone represented 150.4% of GDP, where 82.9% was domestic credit from the banking sector. Meanwhile, in the United States, where access to capital markets is much more developed, these percentages were 149.9% and 48.9% of GDP, respectively, a phenomenon that is equally evident when compared with other countries and regions of the world (see Chart 2.4-a).

This limits financing options for companies and households in the European Union, especially SMEs, which face greater restrictions to growth and adaptation, as they do not have alternative funding sources to the same degree as those in the United States, especially in times of financial crisis, when bank lending often contracts. The global financial crisis of 2008 revealed the vulnerabilities of this model, as restricted lending severely affected the European economy.

To address this problem, the European Union has decided to promote an initiative to develop the Capital Markets Union (CMU) in order to expand and diversify sources of financing, reducing dependence on banks. This is a complex, slow-moving initiative with still limited integration of the capital markets, which reduces the bloc's competitiveness versus regions like the United States. The absence of a solid alternative in the European capital market limits the capacity of its companies to obtain the funds necessary to innovate and expand, affecting Europe's ability to attract and retain innovative, high-growth companies.

Chart 2.4-a
Selected countries: domestic lending to the private sector by banks (% GDP)



Source: MAPFRE Economics (based on data from the World Bank)

This leads these companies to seek financing abroad or even relocate their operations to more developed capital markets, such as the United States. This represents a significant loss of innovative and competitive potential for the European Union, as well as a leak of talent and capital that could strengthen the European economic ecosystem. Meanwhile, the slow development of the CMU also means Europe loses opportunities in the scope of sustainable finance, a key sector for the European Union and its climate goals. Without a unified capital market, the capacity to issue accessible sustainable bonds uniformly is limited, affecting the financing of ecological and digital transition

projects, essential for the European Green Deal, among other projects. Together, these challenges highlight the urgency to advance toward greater integration of the European capital markets, as the lack of progress not only weakens the region's economic competitiveness, but also limits its ability to respond in a crisis and to sustain long-term growth.[4]

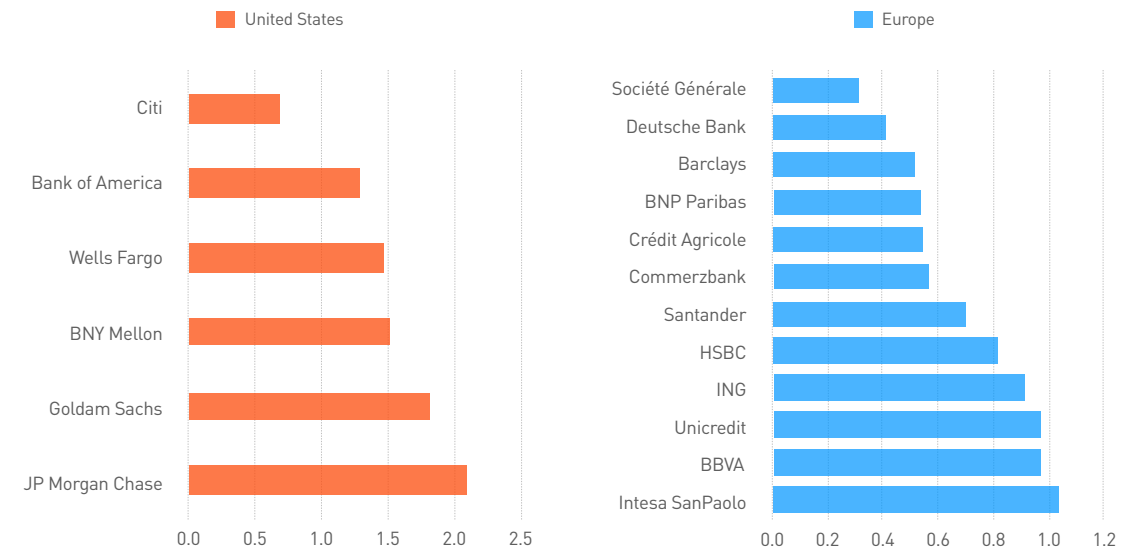
Banking Union in the European Union

The banking union in the European Union is another key measure to build a more integrated, secure, and competitive bloc, especially in a context where financial risks and local crises may have regional repercussions. The initiative of the Banking Union also arose from the 2008 financial crisis, when the need for a system that could jointly manage the financial problems of member states became evident to prevent isolated banking crises from negatively affecting the entire Eurozone economy. To that end, the European Union established three fundamental pillars: the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM), and the European Deposit Insurance Scheme (EDIS), the latter being the pillar that is still being developed.

In contrast, in the United States, the banking system benefits from a highly consolidated regulation and supervision framework. Both the Federal Reserve and the Federal Deposit Insurance Corporation (FDIC) provide a unified and stable environment where the banks operate with the confidence of having strong institutional backing, reinforced by enhanced systemic risk and financial stability mechanisms in the wake of the Lehman Brothers crisis. The FDIC insures deposits uniformly across all states, which considerably reduces the risk of a run on the banks in times of crisis, as depositors are guaranteed their funds up to a certain amount. Such guarantees increase the stability of and confidence in the United States banking system.

During the last crisis caused by the pandemic, banks in the United States benefited from the Federal Reserve's capacity to provide immediate liquidity and backing through emergency mechanisms. The consolidation of

Chart 2.4-b
United States and Europe: price/book value of banks



Source: MAPFRE Economics (based on Bloomberg data)

the United States banking system has allowed for the creation of large and diversified banks that can offer integrated financial services and effectively compete in the global market. European banks, on the other hand, have limited capacity to expand and generate economies of scale, which affect their profitability and make them less attractive to investors in the capital market (see Chart 2.4-b).

Finally, it is worth noting that the creation of the Fiscal Union and the pan-European bond, known as the "Eurobond" or *safe asset,* are other aspects in development that may help further the financial integration and economic stability of the European Union.

Emerging markets

Finally, banking penetration in emerging markets and developing countries is a goal that requires improvements in financial infrastructure, education, and technology, overcoming barriers such as lack of physical access to financial services, low digital connectivity, and distrust in the system. Establishing networks of branches, correspondent agents, and accessible digital payment platforms, in addition to simplifying requirements to open accounts and designing inclusive financial products, among other factors, are key elements that must be considered in these markets.

In this regard, countries like India, Brazil, and Mexico have achieved significant advances. Brazil has significant expanded its network of agents, linking social programs with bank accounts, while Mexico has relied on the expansion of digital payments. Both countries have significantly advanced banking systems compared to other developing countries that are in the initial stages and have been able to implement more robust financial infrastructures, such as extensive networks of correspondent banks and interoperable digital platforms, notably tools like PIX in Brazil and CoDi in Mexico. They have also proposed regulations that facilitate the opening of basic accounts and encourage digital payments.

3. Credit and risk cycles for the financial sector and insurance industry

3.1 Credit cycles and economic crises

The expansion of credit to the private sector (households and companies) has a beneficial effect on insurance activity, especially in emerging and developing markets, as shown in the first part of this study. However, credit activity is not exempt from risk, as excessive and accelerated growth in lending, along with the easing of criteria to grant credit, may trigger or exacerbate economic crises. Financial institutions react to these situations by restricting credit, which often leads to significant corrections in asset prices, further prolonging and deepening the initial economic crisis.

This is a situation experienced in markets like Japan in the 1990s, and later in the United States, where the first signs appeared in 2007, triggering a crisis in subsequent years with the bankruptcy of Lehman Brothers in 2008. This crisis, with global repercussions, affected the Spanish economy particularly severely, which accumulated a series of vulnerabilities in its real estate and banking sector in those years. These vulnerabilities were eventually transferred to the sovereign credit of not just Spain, but also other peripheral countries in the Eurozone, triggering the worst crisis faced by the euro since its inception in 2011 and 2012.

One of the indicators used to determine the moment being experienced in a credit cycle is called the "credit-to-GDP gap," which measures credit deviation in relation to GDP, with respect to the long-term historical average. This ratio is used, among other indicators, by bank supervisors to assess systemic risks and determine the demands of the countercyclical capital buffer for lenders, following the methodology of the Bank for International Settlements (BIS).[5] Analyzing a historical series of the private sector credit gap for households and non-financial corporations in the three countries discussed that faced crises derived from excessive credit (Japan, the United States, and Spain), we see that these economic crises affected variables directly related to insurance activity. These include new housing construction, real estate prices, and new vehicle registrations, in addition to their effects on nominal GDP and private consumption, which also have negative repercussions on insurance activity.

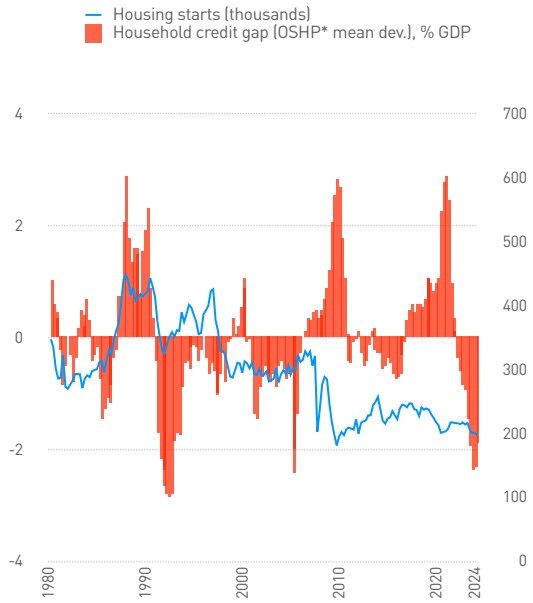
3.1.1 Japan

In Japan, the expansionary credit cycle that took place in the late 1980s and early 1990s is evident, with a broad positive credit-to-GDP gap for both households and the corporate sector. During the 1980s, a combination of low interest rates, lax monetary policies, and excessive confidence in continued economic growth led to an accelerated increase in land and housing prices, especially in metropolitan areas like Tokyo, fueled by the belief that real estate prices would never drop.[6] Banks and financial institutions heavily expanded lending secured by mortgages on land and houses whose valuations were constantly increasing, and companies invested heavily in real estate by resorting to credit. This generated a further rise in the prices of these assets and in all prices in general, causing an inflationary spiral.

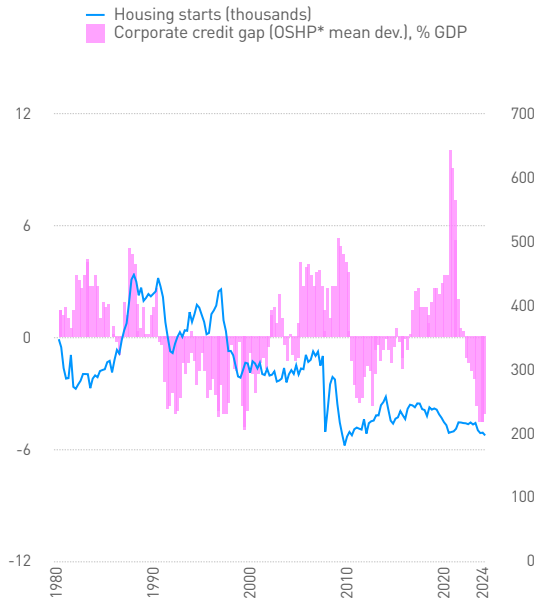
Faced with this situation, in the early 1990s, the Bank of Japan began raising interest rates to control inflation, which led to a sudden correction in asset prices. The real estate market collapsed, leaving the banks, non-financial corporations, and individuals

Chart 3.1.1
Japan: credit gap vs. relevant variables

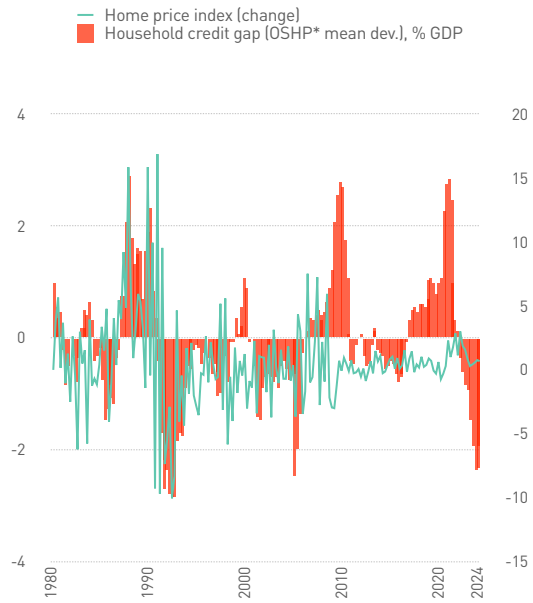
HOUSEHOLD CREDIT GAP VS. HOUSING STARTS



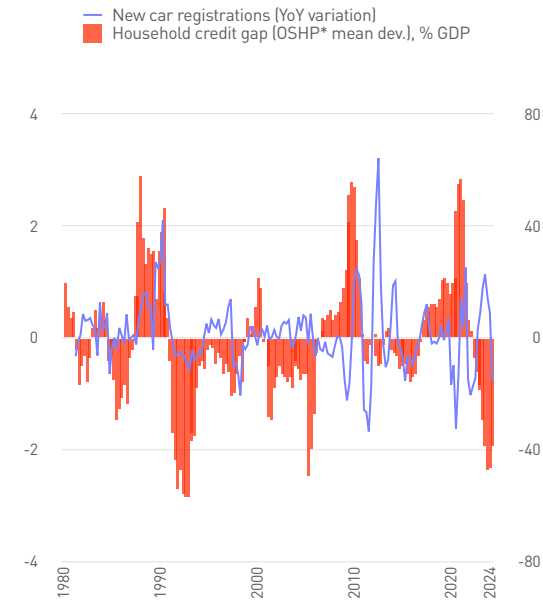
NON-FINANCIAL UNDERTAKINGS CREDIT GAP VS. HOUSING STARTS



HOUSEHOLD CREDIT GAP VS. HOUSING PRICES



HOUSEHOLD CREDIT GAP VS. NEW CAR REGISTRATIONS



Source: MAPFRE Economics (based on data from BIS and OEF/Haver)

with huge debts and devalued assets. This slowed down new housing construction, following the sharp contraction in credit, triggering a deep economic recession that lasted a decade and had long-term consequences for the Japanese economy (see Chart 3.1.1).

3.1.2 United States

The United States real estate crisis of 2007-2008 was also caused by the uncontrolled expansion of credit and speculation in the real estate market. For years, low interest rates and lax mortgage lending, especially those known as *subprime* loans, fueled a real estate bubble. Millions of people, including those with low income and poor credit histories, accessed mortgage loans, believing home prices would continue to rise indefinitely. Many of these loans were securitized and sold to institutional and retail investors around the globe, thanks to the deep development of the United States capital market.

This overheating of the real estate market eventually spread to the rest of the economy, creating an inflationary spiral, as occurred in Japan in the early 1990s. When the Federal Reserve started to raise monetary policy interest rates in 2004 to control inflation, many owners were unable to pay their mortgages, which caused a mass increase in mortgage foreclosures. Housing values plummeted, dragging down banks and financial institutions that had invested in mortgage-backed derivative products. The result was a liquidity crisis that rapidly spread throughout the global financial system, triggering what became known as the Great Recession (see Chart 3.1.2).

3.1.3 Spain

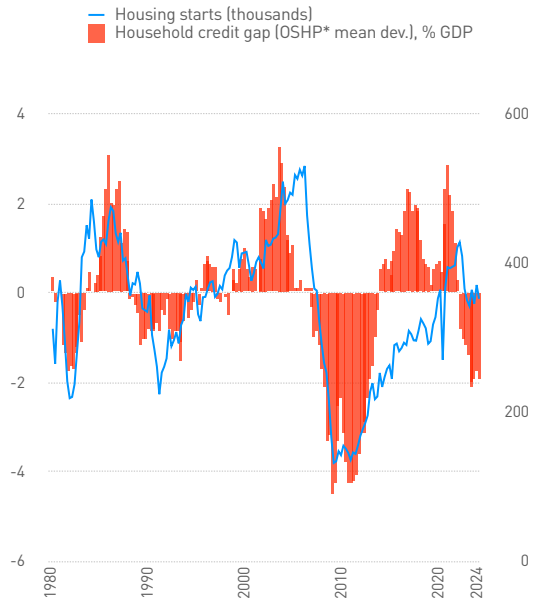
Another economic crisis triggered by excessive lending was the real estate crisis in Spain, which peaked between 2007-2008 and lasted until 2011-2012. The episode was linked to the sovereign debt crisis in the Eurozone, a regional replication of the Great Recession, with its epicenter in the U.S. housing market. The Spanish real estate crisis was the result of a speculative bubble in the construction sector that had been building up since the late 1990s. It was also influenced by the strong expansion of credit at the beginning of the 2000s, with Spain's entry into the euro. Factors such as the easy access to credit, low interest rates, and growing demand, both domestic and foreign, led to a disproportionate increase in prices and new housing construction, which grew at an exorbitant rate fueled credit, often in areas with little real demand, generating expectations that prices would continue to rise indefinitely.

The global financial crisis of 2008 triggered the crisis in Spain. Credit became more expensive, demand contracted, and prices started to drop. Thousands of households were unable to pay their mortgages, which led to an increase in mortgage foreclosures and aggravated the crisis. The construction sector, the engine of the Spanish economy during those years, plummeted, dragging other sectors down with it and causing a sharp rise in unemployment.

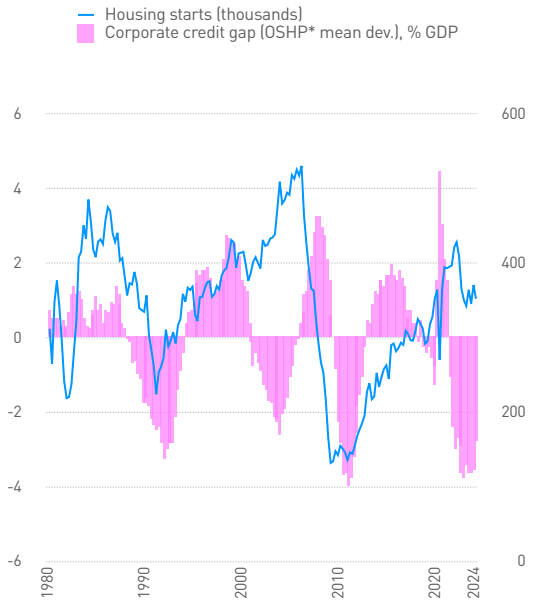
The real estate crisis had a profound impact on the Spanish economy and, since then, new housing construction has never fully recovered to the levels seen at the peak of the credit cycle that triggered the subsequent crisis (see Chart 3.1.3). As a result, banks underwent restructuring and consolidation in the following decade, which drastically changed the outlook for both the banking sector and the insurance industry, with the near disappearance of smaller banks, particularly savings banks (some of which had been in operation for over a century), along with the proliferation of insurance product distribution agreements through bank office networks.

Chart 3.1.2
United States: credit gap vs. relevant variables

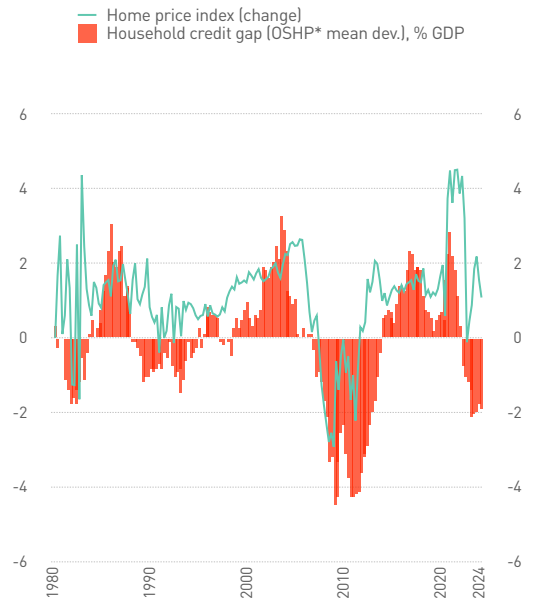
HOUSEHOLD CREDIT GAP VS. HOUSING STARTS



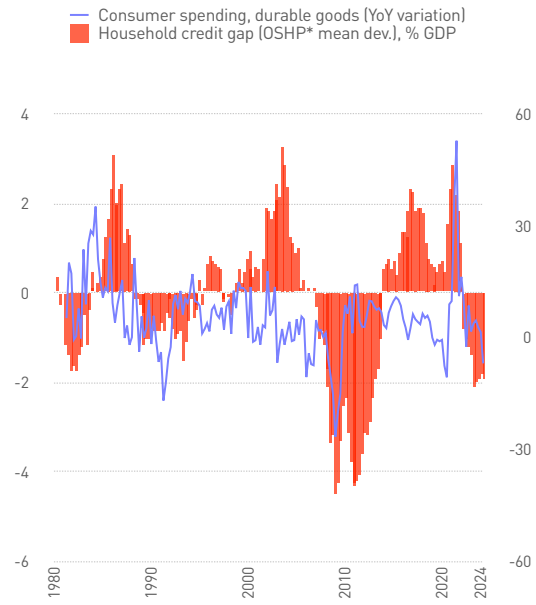
NON-FINANCIAL UNDERTAKINGS CREDIT GAP VS. HOUSING STARTS



HOUSEHOLD CREDIT GAP VS. HOUSING PRICES



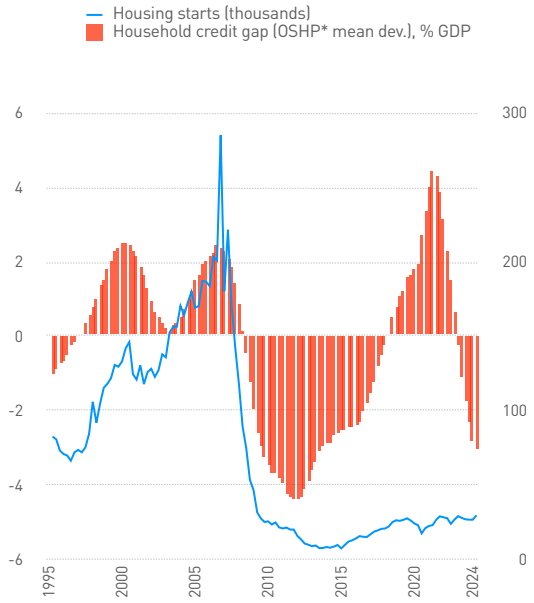
HOUSEHOLD CREDIT GAP VS. SPENDING ON DURABLE GOODS



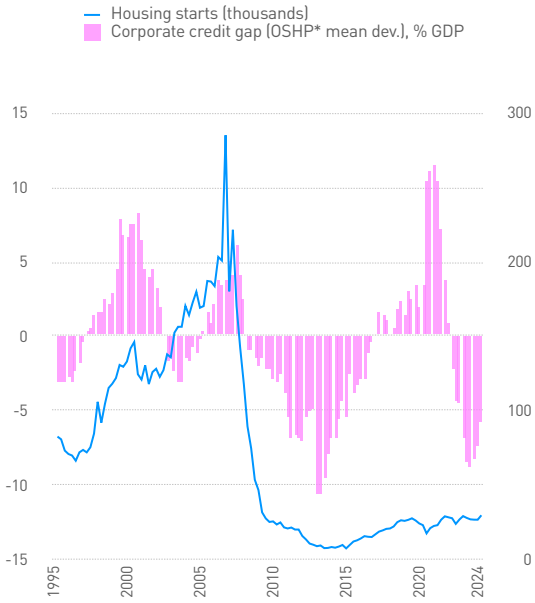
Source: MAPFRE Economics (based on data from BIS and OEF/Haver)

Chart 3.1.3
Spain: credit gap vs. relevant variables

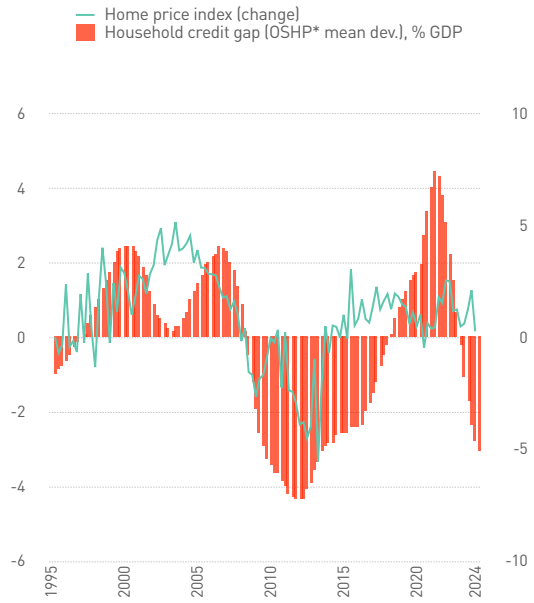
HOUSEHOLD CREDIT GAP VS. HOUSING STARTS



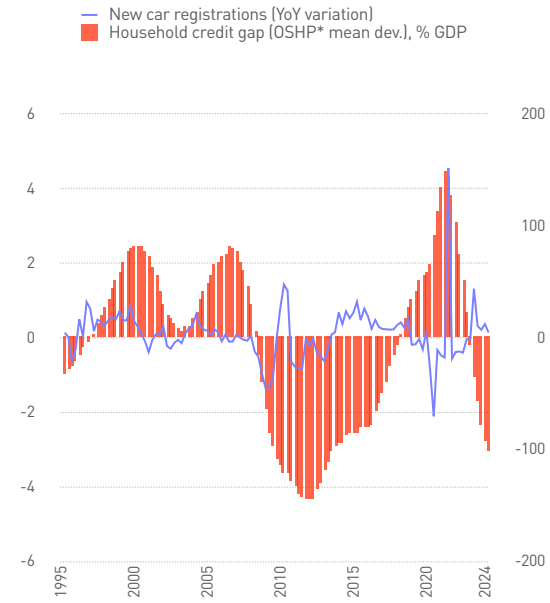
NON-FINANCIAL UNDERTAKINGS CREDIT GAP VS. HOUSING STARTS



HOUSEHOLD CREDIT GAP VS. HOUSING PRICES



HOUSEHOLD CREDIT GAP VS. SPENDING ON DURABLE GOODS



Source: MAPFRE Economics (based on data from BIS and OEF/Haver)

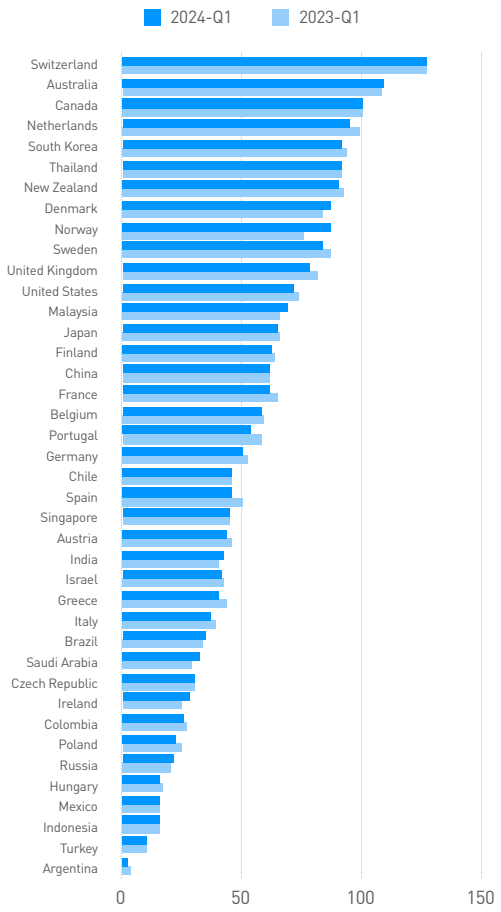
3.2 Current situation of the credit cycle in the main global economies

3.2.1 Weight of credit components with respect to GDP

When assessing the risk from the credit perspective of different economies, we must consider both the debt level of the countries in relation to the size of their economy, and the stage of the credit cycle they are in, keeping in mind the comparison with the long-term historical average of these indicators (credit-to-GDP gap). Charts 3.2.1-a to 3.2.1-d and Table 3.2.1 present a detailed comparison of each credit component (government, household, and company credit) in relation to GDP for a set of selected economies.

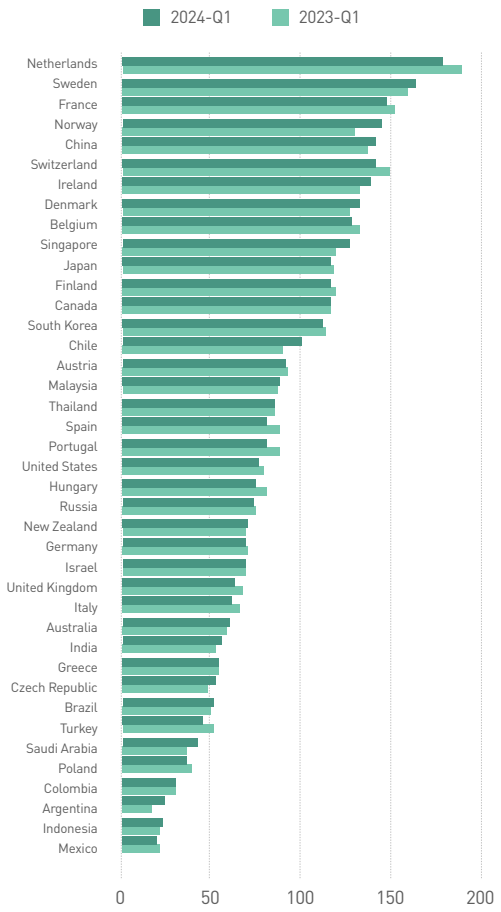
According to this information, emerging economies and developing countries often have substantially lower credit-to-GDP ratios than developed markets, which have superior capital markets and credit ratings, allowing their economies to maintain higher levels of indebtedness without, in principle, generating financial stability problems. However, as the previous analysis has confirmed, accelerated credit expansion has created profound economic crises in these markets as well,

Chart 3.2.1-a
Selected countries: lending to households and NPOs
(% GDP)



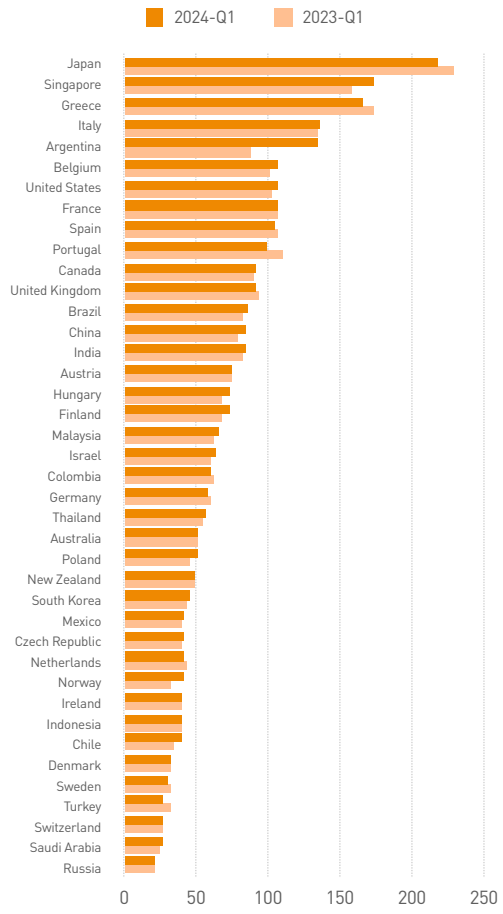
Source: MAPFRE Economics (based on BIS data)

Chart 3.2.1-b
Selected countries: lending to non-financial undertakings
(% GDP)



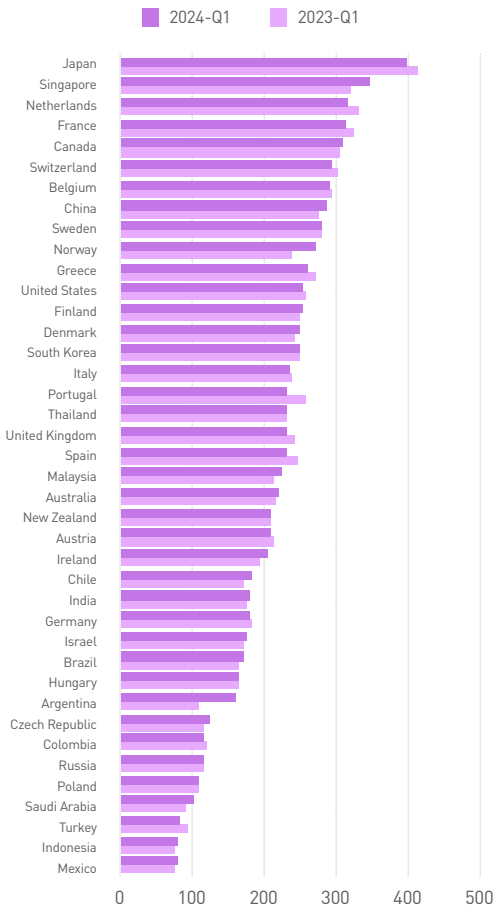
Source: MAPFRE Economics (based on BIS data)

Chart 3.2.1-c
Selected countries: lending to governments (% GDP)



Source: MAPFRE Economics (based on BIS data)

Chart 3.2.1-d
Selected countries: total non-financial lending (% GDP)



Source: MAPFRE Economics (based on BIS data)

with global consequences. For this reason, it is necessary to supplement the analysis with other indicators that can anticipate, to a greater or lesser extent, the onset of a financial crisis arising from an excessive and accelerated expansion of debt among governments, households, and companies, such as credit-to-GDP gaps, measured as the deviation of credit-to-GDP ratios from their long-term historical average.

3.2.2 Credit cycle: credit-to-GDP gaps

Credit cycles can be extremely significant for the economy and, by extension, for the insurance industry, as they influence variables directly related to insurance activity, such as new housing construction, real estate prices, or new vehicle registrations. They also affect nominal GDP and private consumption, which have repercussions on levels of insurance demand. Table 3.2.2 shows the current status of the credit cycles in the world's main economies at the close of Q1 2024, from the perspective of risk for the cited economies and, similarly, for their insurance industry.

According to these indicators, the economy of Argentina presents the largest risk in relation to its credit cycle, basically due to the high public sector credit gap, 19.2 percentage

Table 3.2.1
Selected countries: components of lending

	Lending to households and NPOs	% GDP	
		2023-Q1	2024-Q1
1	Argentina	3.9	3.5
2	Turkey	11.3	10.5
3	Mexico	16.1	16.4
4	Indonesia	16.0	16.4
5	Hungary	18.1	16.6
6	Russia	20.8	22.2
7	Poland	25.1	23.4
8	Colombia	27.8	26.9
9	Ireland	24.9	28.7
10	Czech Republic	31.0	30.6
11	Saudi Arabia	29.6	33.4
12	Brazil	34.1	35.3
13	Italy	39.6	37.3
14	Greece	44.3	41.3
15	Israel	43.1	42.0
16	India	40.5	42.7
17	Austria	46.6	43.8
18	Singapore	45.3	45.6
19	Spain	50.4	46.0
20	Chile	46.2	46.2
21	Germany	53.1	50.8
22	Portugal	59.0	54.5
23	Belgium	59.6	58.3
24	France	65.1	61.6
25	China	62.2	62.6
26	Finland	64.6	63.6
27	Japan	66.8	65.3
28	Malaysia	66.4	69.5
29	United States	74.2	72.1
30	United Kingdom	82.6	78.8
31	Sweden	87.5	83.9
32	Norway	76.0	87.5
33	Denmark	84.1	88.1
34	New Zealand	93.1	91.3
35	Thailand	91.6	91.8
36	South Korea	94.4	92.0
37	Netherlands	100.3	94.9
38	Canada	100.6	101.4
39	Australia	109.3	110.3
40	Switzerland	127.3	127.7

	Lending to non-financial undertakings	% GDP	
		2023-Q1	2024-Q1
1	Mexico	21.6	20.5
2	Indonesia	22.7	24.0
3	Argentina	18.1	25.3
4	Colombia	31.5	30.6
5	Poland	39.9	36.8
6	Saudi Arabia	37.3	43.5
7	Turkey	51.9	45.6
8	Brazil	50.7	52.1
9	Czech Republic	48.3	53.9
10	Greece	55	54.4
11	India	52.9	55.8
12	Australia	59.3	60.3
13	Italy	65.8	62.6
14	United Kingdom	67.6	63.4
15	Israel	69.0	69.0
16	Germany	71.2	69.3
17	New Zealand	69.7	70.3
18	Russia	75.1	73.8
19	Hungary	81.6	76.0
20	United States	79.9	76.8
21	Spain	88.5	81
22	Portugal	89.2	81
23	Thailand	86.0	85.9
24	Malaysia	87.1	89.5
25	Austria	93.6	91.8
26	Chile	90.9	99.9
27	South Korea	114.2	112.2
28	Finland	119.7	117.4
29	Canada	117.3	117.4
30	Japan	118.3	117.4
31	Singapore	119.5	126.7
32	Belgium	133.3	128.8
33	Denmark	126.7	132.5
34	Ireland	132.9	139.3
35	Switzerland	149.1	142
36	China	137.9	142.5
37	Norway	130.2	144.4
38	France	152.8	147.8
39	Sweden	159.7	164.5
40	Netherlands	189.1	179.2

	Lending to governments	% GDP	
		2023-Q1	2024-Q1
1	Russia	21.1	21.2
2	Saudi Arabia	24.0	26.8
3	Switzerland	26.7	27.0
4	Turkey	32.2	27.4
5	Sweden	32.3	30.5
6	Denmark	31.7	32.0
7	Chile	34.6	39.0
8	Indonesia	38.9	39.1
9	Ireland	39.3	39.3
10	Norway	33.1	41.5
11	Netherlands	44.1	41.8
12	Czech Republic	39.5	42.0
13	Mexico	40.4	42.1
14	South Korea	44.1	45.4
15	New Zealand	48.1	49.0
16	Poland	44.8	50.2
17	Australia	50.6	50.4
18	Thailand	53.9	56.0
19	Germany	60.7	58.7
20	Colombia	62.8	60.5
21	Israel	60.3	64.6
22	Malaysia	61.8	65.6
23	Finland	67.6	72.4
24	Hungary	67.8	72.7
25	Austria	74.1	74.3
26	India	82.5	83.7
27	China	78.5	84.7
28	Brazil	81.6	85.5
29	United Kingdom	93.9	90.7
30	Canada	89.4	91.7
31	Portugal	110.2	98.7
32	Spain	106.8	105.4
33	France	106.5	105.9
34	United States	103.6	106.2
35	Belgium	101.3	106.5
36	Argentina	87.7	133.5
37	Italy	134.6	135.6
38	Greece	173.6	165.8
39	Singapore	158.2	174.0
40	Japan	228.8	216.9

	Total lending (non-financial sector)	% GDP	
		2023-Q1	2024-Q1
1	Mexico	78.1	79
2	Indonesia	77.6	79.5
3	Turkey	95.4	83.5
4	Saudi Arabia	90.9	103.7
5	Poland	109.8	110.4
6	Russia	117	117.2
7	Colombia	122.1	118
8	Czech Republic	118.8	126.5
9	Argentina	109.7	162.3
10	Hungary	167.5	165.3
11	Brazil	166.4	172.9
12	Israel	172.4	175.6
13	Germany	185	178.8
14	India	175.9	182.2
15	Chile	171.7	185.1
16	Ireland	197.1	207.3
17	Austria	214.3	209.9
18	New Zealand	210.9	210.6
19	Australia	219.2	221
20	Malaysia	215.3	224.6
21	Spain	245.7	232.4
22	United Kingdom	244.1	232.9
23	Thailand	231.5	233.7
24	Portugal	258.4	234.2
25	Italy	240	235.5
26	South Korea	252.7	249.6
27	Denmark	242.5	252.6
28	Finland	251.9	253.4
29	United States	257.7	255.1
30	Greece	272.9	261.5
31	Norway	239.3	273.4
32	Sweden	279.5	278.9
33	China	278.6	289.8
34	Belgium	294.2	293.6
35	Switzerland	303.1	296.7
36	Canada	307.3	310.5
37	France	324.4	315.3
38	Netherlands	333.5	315.9
39	Singapore	323	346.3
40	Japan	413.9	399.6

Source: MAPFRE Economics (based on BIS data)

Table 3.2.2
Selected countries: credit gap

		Household credit gap (OSHP mean deviation*), % GDP		Corporate credit gap (OSHP mean deviation*), % GDP		Government credit gap (OSHP mean deviation*), % GDP		Total credit gap (non-financial sector) (OSHP mean deviation*), % GDP	
		Var. 2023-2024	2024-Q1	Var. 2023-2024	2024-Q1	Var. 2023-2024	2024-Q1	Var. 2023-2024	2024-Q1
1	Argentina	0.0	-0.1	4.4	3.2	24.1	19.2	28.5	22.3
2	Ireland	3.9	4.7	17.9	13.1	6.8	2.8	28.6	20.6
3	Norway	16.0	6.4	13.9	6.8	7.6	4.2	37.5	17.3
4	Denmark	10.1	4.5	7.9	6.8	5.7	0.5	23.7	11.8
5	Czech Republic	0.8	-0.8	6.2	5.3	0.8	1.5	7.8	6.0
6	China	0.5	-1.7	-0.7	6.0	0.8	0.9	0.6	5.2
7	Chile	0.4	0.0	13.6	3.5	4.3	1.1	18.3	4.7
8	Singapore	3.6	0.9	15.8	-0.7	2.2	2.7	21.6	3.0
9	Saudi Arabia	2.7	1.2	5.6	1.5	4.1	-1.2	12.5	1.5
10	Poland	2.7	-0.7	0.3	-1.2	7.2	3.3	10.2	1.3
11	India	0.8	0.4	0.6	2.9	1.8	-2.0	3.1	1.2
12	Belgium	1.1	-1.5	4.5	-1.5	13.2	4.2	18.8	1.2
13	Australia	4.8	0.9	3.7	2.1	3.2	-1.9	11.6	1.1
14	Brazil	0.0	0.2	1.9	0.0	7.0	0.4	8.9	0.6
15	Malaysia	4.2	0.5	7.4	-0.5	2.3	0.3	13.9	0.3
16	Russia	0.5	0.0	0.2	0.4	-1.4	-0.3	-0.8	0.1
17	Israel	-0.2	-1.2	0.5	-0.5	9.4	1.6	9.8	-0.1
18	Mexico	0.3	0.1	1.2	-0.7	1.3	0.5	2.8	-0.1
19	Finland	1.3	-1.2	-0.4	-1.7	6.4	2.4	7.3	-0.5
20	Indonesia	0.7	0.1	2.3	0.6	0.8	-1.7	3.8	-1.0
21	New Zealand	1.2	-2.4	2.4	1.5	-0.3	-1.1	3.3	-2.0
22	Canada	3.2	-1.0	4.0	-2.0	10.3	-0.4	17.6	-3.4
23	Austria	0.8	-2.4	2.2	-1.9	8.2	0.7	11.3	-3.5
24	Hungary	0.2	-1.5	-3.6	-5.9	5.7	3.1	2.3	-4.3
25	Colombia	1.0	-1.1	0.8	-0.5	1.5	-3.9	3.4	-5.5
26	United States	0.2	-1.9	0.6	-2.8	8.3	-0.9	9.1	-5.6
27	Italy	0.4	-1.8	1.4	-2.2	13.3	-1.7	15.1	-5.6
28	Sweden	0.9	-3.3	16.1	-2.6	1.8	-0.2	18.7	-6.1
29	Germany	0.0	-2.2	0.1	-2.4	4.1	-1.8	4.2	-6.4
30	Thailand	1.1	-2.3	0.3	-2.7	-0.4	-2.0	1.0	-6.9
31	South Korea	0.4	-4.9	-5.5	-3.5	0.3	0.6	-4.8	-7.7
32	Switzerland	2.4	-1.0	-2.0	-8.5	1.3	0.6	1.7	-8.9
33	Netherlands	1.3	-2.6	7.1	-6.2	3.7	-0.2	12.1	-8.9
34	United Kingdom	1.0	-2.8	2.1	-2.4	13.7	-4.0	16.8	-9.2
35	Spain	-1.9	-3.0	2.7	-5.7	13.3	-2.3	14.0	-11.1
36	France	-0.9	-3.5	3.3	-6.5	8.6	-1.9	11.0	-12.0
37	Turkey	0.7	-0.3	4.4	-6.7	-0.1	-5.4	5.0	-12.4
38	Portugal	0.7	-2.5	1.2	-5.2	6.5	-6.6	8.3	-14.3
39	Greece	4.0	-1.9	4.4	-2.2	11.9	-10.2	20.3	-14.3
40	Japan	-0.5	-1.9	-0.3	-4.1	-3.9	-8.8	-4.7	-14.9

Source: MAPFRE Economics (based on BIS data)

points of GDP over its long-term historical average at the close of Q1 2024. This is followed by Ireland, Norway, and Denmark, due to the high gap in credit to both households and non-financial companies, with percentages of GDP substantially above their long-term historical average. The Czech Republic and China are also noteworthy, due to the credit gap they present for non-financial companies, with percentages of GDP significantly higher than their long-term historical average.

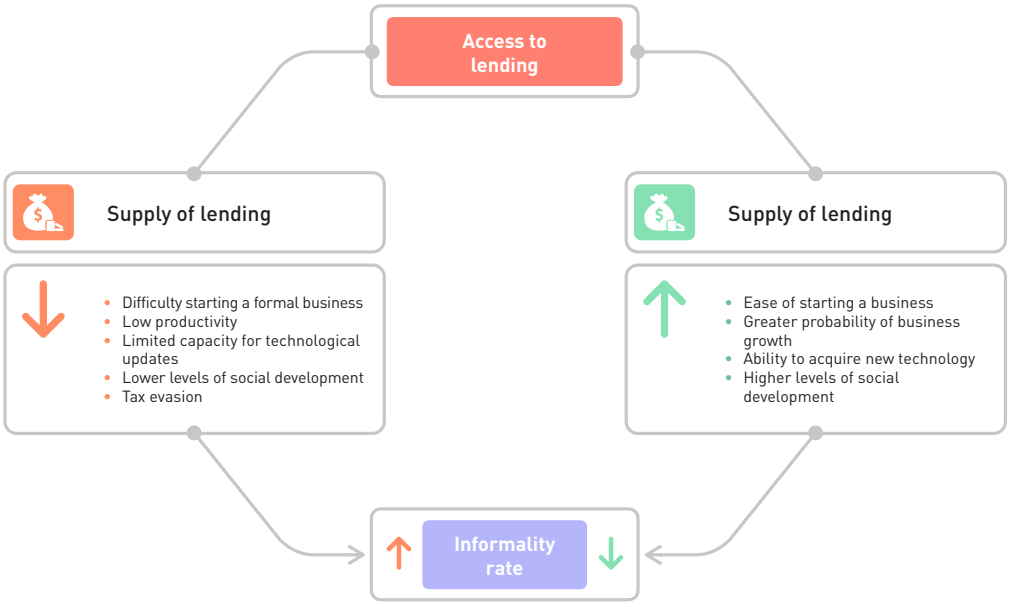
Japan stands out on the lower part of Table 3.2.2. Its economy presents a lower risk, despite its high ratio of government lending to GDP, due to the long deleveraging process it has carried out, only interrupted during the Great Recession and the crisis generated by the COVID-19 pandemic, but which it has resumed in the last year. Greece and Portugal also stand out from a credit cycle perspective, with negative credit gaps in all three components (government, households, and companies), i.e., with credit-to-GDP ratios at the end of Q1 2024 below their long-term historical average. While both economies have reduced the negative gap significantly in the last year (as is also the case with France, Spain, and the United Kingdom), the rapid increase in lending to their respective governments would indicate a cycle change that may generate vulnerabilities in the future, and even now, as has occurred with French sovereign debt in recent months.

4. Credit, banking penetration, and the informal economy

Credit is a crucial catalyst for economic development, since it allows companies to undertake the investments required to finance activities that generate the greatest added value, without having to wait to produce the equity necessary to expand. Meanwhile, credit also stimulates household consumption and is fundamental for the development of the real estate market.

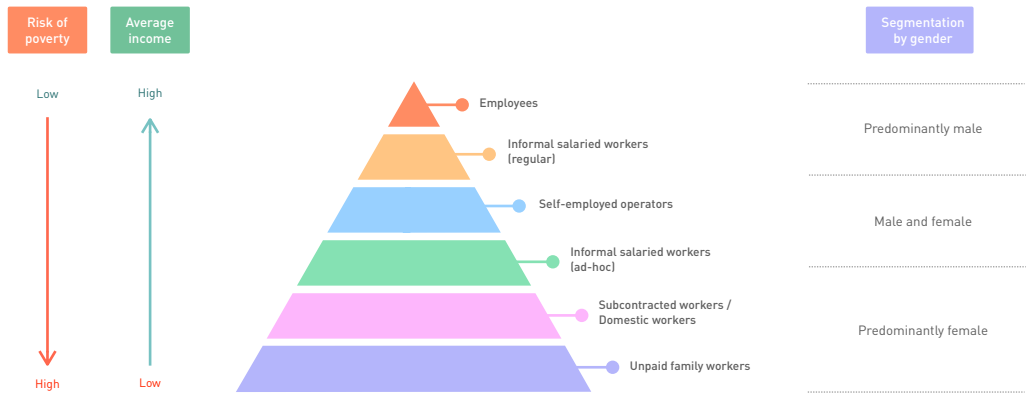
Economic development with a labor market based on formal labor relations, with regulated labor contracts and an adequate social protection system, is essential in the development of credit, especially to the private sector. In contrast, the informality of labor relations makes it very complicated to undergo the credit granting process, and in cases where credit could be granted, it substantially raises interest rates due to the financial risks arising from information asymmetry, which increases insecurity for financial intermediaries. These combined factors severely limit the informal population's access to credit, perpetuating low productivity and restricting opportunities for economic growth for both companies and individuals and their businesses (see Chart 4-a). In addition, it should be noted that the problem of informal labor relations especially affects emerging countries. In the informal economy, WIEGO studies from the late 1990s revealed a hierarchy of income and segmentation by job and gender, as shown in Chart 4-b.

Chart 4-a
Access to lending and informal economy



Source: García Napa, M. S., and Manyari Quispe, K. E. (2023)

Chart 4-b
Type of employment

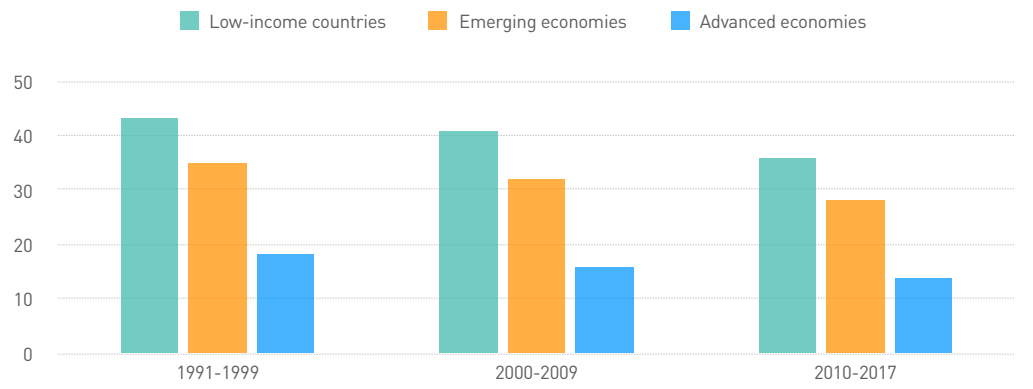


Source: Chen, M. A. (2012), *The Informal Economy: Definitions, Theories and Policies.*

4.1 Informal economy by region

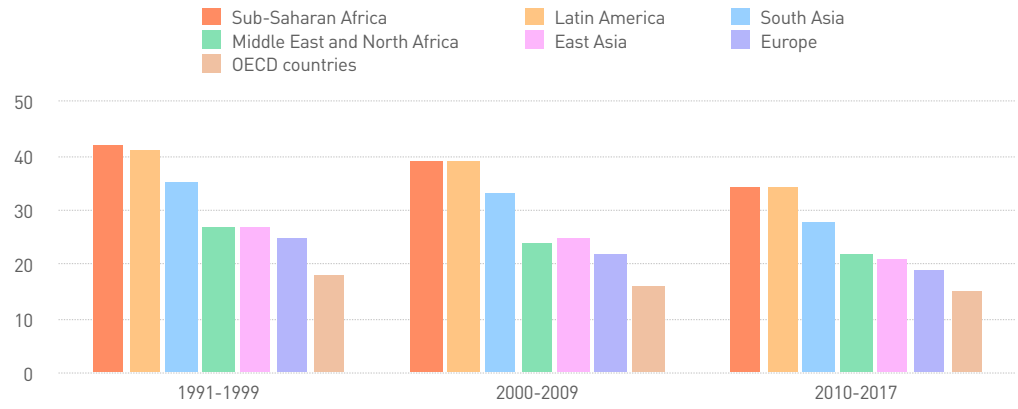
The informal economy is difficult to quantify, as it tends to avoid identification or registration, which limits the availability of direct microeconomic data. The International Labour Organization (ILO) estimates that around 2 billion people, that is, 60% of the population over 15 years of age in 2018, worked in the informal sector. Of these workers, most (about 85%) are employed in informal small enterprises. However, the COVID-19 pandemic led to positive conclusions about public policies that promote digital infrastructures capable of identifying the informal sector and expanding its social protection, facilitating its integration into the formal sector. Chart 4.1-a shows the evolution of the informal economy globally, from 1991 to 2017, for low-income countries, where it reaches a high percentage of 36%, and for emerging and advanced economies (28% and 14%, respectively). When this same metric is presented by region, we see that Sub-Saharan Africa and Latin America are the two regions with the highest levels of informality, reaching 34%, compared to other regions (see Chart 4.1-b).

Chart 4.1-a
Economic regions: weight of the informal economy
(% GDP)



Source: International Monetary Fund (2021), *The Global Informal Workforce: Priorities for Inclusive Growth.*

Chart 4.1-b
Geographic regions: weight of the informal economy
(% GDP)



Source: International Monetary Fund (2021), *The Global Informal Workforce: Priorities for Inclusive Growth.*

Meanwhile, Table 4.1-a offers a comparison of the percentage of the estimated population in different regions with access to credit, bank services, and informal employment in 2019. The Organisation for Economic Co-operation and Development (OECD) in 2007 identified several barriers to labor formalization, including regulation, administrative obstacles, and tax system requirements that disproportionately affect smaller companies. These barriers are compounded by overly complex regulations and poor tax and customs administration. The agency also pointed to socio-cultural barriers, social exclusion, corruption, and criminality as major deterrents to formalization, as companies prefer to stay out of the tax system in order to protect themselves. Meanwhile, the ILO (2018) found that the tendency to work in the informal economy is higher among younger workers and adults over 65, and is also higher among women than men, due to the greater flexibility it offers in terms of work-life balance.

Other authors have emphasized the difficulty of accessing financing, rather than regulatory issues, as a key factor preventing labor formalization. According to La Porta and Shleifer (2014), based on data from the World Bank's enterprise survey ("*obstacles to doing business*" indicator), 43% of entrepreneurs interviewed in the informal sector consider the lack of access to financing as the main obstacle to formalizing their business. Less than 10% of companies, whether formal or informal, consider factors such as corruption, business licenses, permits, and the legal system to be relevant to their business decisions. Similarly, the lack of access to suitable land is a significant obstacle for informal enterprises; this is partly because many of them occupy their facilities illegally and fear eviction. Another

Table 4.1-a
Geographic regions: access to lending, banking services and informal employment

Region	Access to lending (%)	Access to banking services (%)	Percentage of informal employment (%)
Sub-Saharan Africa	15	10	85
South Asia	30	35	70
Latin America and the Caribbean	40	45	60
Eastern Europe and Central Asia	55	60	40
Middle East and North Africa	25	30	50

Source: MAPFRE Economics (with data from ILOSTAT and the World Bank)

Table 4.1-b
Geographic regions: access to banking services

Region	Adults with a bank account (%)	Adults with access to lending (%)
Latin America and the Caribbean	55	11
Sub-Saharan Africa	29	5
South Asia	70	8
Eastern Europe and Central Asia	65	18
Middle East and North Africa	45	7

Source: MAPFRE Economics (based on data from the World Bank)

relevant fact provided by these statistics is that it is rare for informal businesses to be formalized.

According to the World Bank, in 2021, approximately 1.7 billion adults worldwide lacked a bank account, with a significant proportion of them participating in the informal economy. In Latin America and the Caribbean, only 55% of adults had an account at a formal financial institution, and access to credit was even more limited. In Sub-Saharan Africa, less than 30% of adults had access to formal financial services, reflecting deep gaps in financial inclusion in regions with high economic informality (see Table 4.1-b).

The Global Findex Database 2021 identified the main obstacles faced by unbanked adults when trying to open a bank account. The most frequently cited barrier was the lack of money, indicating that many people do not consider it necessary or feasible to open a bank account when their income is not sufficient to save or maintain a balance. In addition, many people consider the costs of banking services to be excessive, further limiting access to financial services. Distance to financial institutions is another important barrier, especially in rural areas and hard-to-reach communities, while lack of necessary documents (such as official IDs or proof of income) also restricts access, particularly for informal workers. Mistrust in financial institutions is another reason mentioned.

The informal economy is often excluded from the formal financial system, which means that a considerable part of the population does not have access to basic banking services such as savings accounts, credit, or insurance. This financial exclusion prevents individuals and small businesses from accumulating assets, managing risks, and making productive investments. Thus, the unbanked informal sector restricts credit growth in the economy. Financial institutions are reluctant to lend to individuals and companies without credit history or collateral to limit operational risk, reducing access to financing needed to expand operations, invest in technology, or improve productivity.

4.2 Technology and financial inclusion

Technology, especially through digital platforms (*fintechs* and *insurtechs*), plays an important role in broadening the financial inclusion of the informal economy, helping overcome traditional barriers and facilitate access to banking and credit services for previously underserved populations. In this regard, three aspects related to the role of digital platforms should be emphasized: their ability to overcome traditional barriers, the facilitation of access to banking and credit services, and their impact on the informal economy.

Overcoming traditional barriers

Unlike traditional banks, which often require extensive documentation and bureaucratic processes, *fintechs* use new data analytics technologies, including artificial intelligence, to assess the creditworthiness of individuals with no formal financial history. This can enable informal workers to access microcredit and other financial products tailored to their needs. According to a report by the Inter-American Development Bank (FinDev Gateway), *fintechs* are playing a key role in

expanding access to financial services in Latin America, especially among low-income populations.

Facilitating access to banking and credit services

Digital platforms have simplified opening bank accounts and conducting financial transactions. For example, e-wallets allow users to store money and make payments and transfers without the need for a traditional bank account. This digitalization not only facilitates transactions and e-commerce, but also creates a financial history that can be used to access credit and other financial services. The adoption of digital technologies has been key to financial inclusion in emerging economies.

Impact on the informal economy

The integration of technology into the financial sector is having a significant impact on the informal economy. It allows access to financial services that help the informal population to save safely, invest in their businesses, and manage risks through more affordable insurance. This contributes to economic stability and reduces the financial vulnerability of these populations. In addition, the formalization of transactions through digital platforms is a catalyst for the transition of informal businesses into the formal sector, boosting economic growth and increasing tax revenue. According to a report by the Financial Inclusion Hub (FINLAC: a new initiative for financial inclusion), the digitalization of financial services has been a key factor in reducing labor informality and promoting financial inclusion.

The impact of technology on financial inclusion is statistically insignificant (and even negative) in advanced economies, but becomes positive in developing countries, showing an overall statistically significant effect. Overall, these results, which hold up well against alternative estimation methods, suggest that *fintech* initiatives have not yet succeeded in promoting financial inclusion in all countries, although they have contributed to its expansion to some extent in developing countries. *Fintechs* allow 50% access to credit in the informal economy, surpassing the traditional banking system (20%). Platforms such as e-wallets facilitate 80% of digital transactions, compared to 30% facilitated by traditional banks, and drive 55% of savings account openings compared to 25% in the traditional banking system.

Several countries have implemented initiatives that promote banking and access to credit for this sector of the population, such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) program, launched in India in 2014. This is a government initiative that facilitates the opening of bank accounts with no minimum balance, offering debit cards and access to insurance and pensions. By August 2021, more than 430 million accounts had been opened under this scheme, which has led to greater financial inclusion and reduced reliance on informal savings and credit systems. This mass banking has increased the mobilization of deposits and is strengthening the stability of the Indian financial system.

Other emerging countries, such as Kenya, have created platforms that allow financial transactions to be made via cell phones, including deposits, withdrawals, transfers, and payments for services. By 2021, more than 90% of Kenyan households were using the M-Pesa platform, which has integrated millions of informal workers into the formal financial system in some capacity, promoting economic growth and business formalization. Another similar initiative is the Billetera Móvil (BIM) in Peru, a platform that allows users to make financial transactions through cell phones without the need for a traditional bank account. In addition, microfinance programs have been established to offer credit to small entrepreneurs in the informal economy, facilitating their transition to formality and improving their economic conditions. Such initiatives enable workers and small business

owners to improve their savings capacity, invest in their businesses, and access financial services that were previously unavailable to them, reducing their financial vulnerability.

In formal economies, the banking penetration level is based on the existence of developed financial infrastructures and a population with access to legal documentation and stable sources of income. Conventional strategies include opening bank branches, offering standardized financial products, and implementing financial education campaigns. These initiatives assume that individuals possess the necessary documentation, such as official IDs and proof of income, and that they have a basic understanding of financial services. In contrast, the informal economy is characterized by a lack of legal documentation, irregular income, and a general distrust of formal institutions. According to a report by the Alliance for Financial Inclusion (AFI Global), more than two billion people work in the informal sector worldwide, underscoring the magnitude of the challenge. Conventional banking strategies do not adequately address these realities, which limits their effectiveness in this context.

4.3 Adaptation of financial institutions

Adapting banking penetration strategies to the needs of the informal economy not only facilitates access to financial services, but also promotes the formalization of businesses, improves the quality of life of individuals, and contributes to economic growth. The World Bank has emphasized that financial inclusion is a key enabler for achieving several of the Sustainable Development Goals, including reducing poverty and promoting inclusive economic growth.

In a country-by-country approach to the informal economy, based on the percentage of wages the company pays to the worker electronically versus those it does not, three groups of countries can be distinguished. First, there are countries with a widespread informal economy and electronic wage payments of less than 40% (Azerbaijan, China, Paraguay, Iraq, Cuba, Ukraine, Bosnia-Herzegovina, Guatemala, Armenia, Botswana, Tajikistan, Peru, Colombia, Moldova, Georgia, Honduras, Egypt, Albania, Mauritius, Philippines, Lebanon, Mongolia, Algeria, Nicaragua, Swaziland, Haiti, Ecuador, Gabon, Fiji, Equatorial Guinea, Reunion, Tunisia, Uzbekistan, Myanmar, Jordan, Vietnam, Indonesia, Bhutan, Libya, Nepal, Ghana, Morocco, Bolivia, Zimbabwe, Liberia, Namibia, Sri Lanka, Burundi, Cambodia, Chad, India, Congo-Brazzaville, Lesotho, Central African Republic, Laos, Gambia, Angola, Yemen, Uganda, Mauritania, Sudan, Mali, Somalia, Eritrea, Benin, Guinea, Rwanda, Cameroon, South Sudan, Niger, Zambia, Togo, Burkina Faso, Senegal, Mozambique, Malawi, Bangladesh, Sierra Leone, Ethiopia, Kenya, Madagascar, Nigeria, Tanzania, Democratic Republic of Congo, Ivory Coast, Pakistan). Secondly, there are countries with a moderate informal economy and between 40% and 60% electronic payments (Kuwait, Czech Republic, Qatar, Hungary, Brazil, Kosovo, Oman, Costa Rica, Uruguay, South Africa, Kazakhstan, North Korea, Montenegro, Brunei, Serbia, Bahrain, Bulgaria, Jamaica, Iran, Panama, Mexico, Dominican Republic, El Salvador, Thailand, Romania, Kyrgyzstan, Macedonia, Belarus, Afghanistan, Syria). And finally, the remaining countries (except those for which no information is available) with electronic wage payments above 60%.

Lastly, we can establish that informality is consistently higher in rural areas than in urban areas at all income levels. Worldwide, it is estimated that 67.1% of rural employment is informal, compared to 32.1% in urban areas. Informality is low in high-income countries compared to low- and middle-income countries. High-income countries show only 17.6% informality in rural areas and 13.6% in urban areas, while low-income countries record significantly higher rates, with 93.7% informality in rural areas and 77.9% in urban areas.

4.4 General policy recommendations at the international level related to informality

Noteworthy work regarding recommendations of international organizations includes Bustamante *et. al.* (2022) for the International Labour Organization (ILO), as well as the recommendations from the Economic Commission for Latin American and the Caribbean (CEPAL) to address informality in Latin America, compiled by Abramo (2021), which are summarized below:

Economic growth strategy and adequate regulation of the labor market

Employment should be the central focus of macroeconomic policies, along with policies for economic growth, productivity, and poverty reduction. The transition toward formality should create an environment that respects fundamental workplace principles and rights, and promotes social dialog among all the parties involved. Local and territorial strategies can contribute to this goal.

Promoting entrepreneurship

The main challenge is to create policies that adequately balance incentives to formalize and disincentives to remain informal. This includes the implementation of simplified registries, strengthening business capacity to comply with regulations and improve working conditions, tax incentives, access to professional training and financing, and measures to simplify regulations and procedures, facilitating tax payment, accountability, and social security affiliation. Countries like Brazil, Argentina, Uruguay, and Colombia have adopted single tax or mono-tax systems, combining reduced tax obligations and access to social security in a single payment.

Improving policy targeting to encourage formality

Social security access must be extended to certain groups of the labor force with a greater tendency to remain informal. For this reason, addressing labor informality requires policies designed to incorporate these segments into the labor market, such as young people, women, people with low levels of education, the self-employed, and some productive sectors such as agriculture.

Better training and promotion of the benefits of formality

It is necessary to increase and improve the spread of information about the benefits of formality, as well as the rights and obligations of employers, workers, and the general public. The purpose is to reduce informality arising from lack of knowledge of regulations, procedures for formalizing a company, and enrolling workers in social security, among other aspects.

Improved auditing

It is important to restructure the institutions in charge of labor, tax, and social security inspections in order to optimize and simplify the services provided.

Education and training of human capital

Education and training of human capital is important, especially for workers with low employability and productivity, ensuring that the programs last long enough to promote effective learning and formal job insertion. In addition, technical-vocational education and training policies that are aligned with the demands of the productive sectors should continue to be strengthened.

4.5 Specific policy recommendations related to credit

Banking the informal economy is essential to promote financial inclusion and sustainable economic development. Public policies play a crucial role in this process, implementing actions to facilitate access to formal financial services for informal workers. The most effective strategies include the digitalization of payments and incentives for opening bank accounts.

Payment digitalization

The transition from cash transactions to digital payments can integrate informal workers into the formal financial system. In this regard, the adoption of mobile payment platforms and e-wallets allows individuals to make and receive payments securely and efficiently, reducing reliance on cash. This digitalization facilitates the tracking of income and expenses, which can serve as a financial history for accessing credit and other banking services. According to the World Bank report *A Digital Revolution for Financial Inclusion*, payment digitalization has been a key factor in the expansion of financial inclusion in several developing countries.

Incentives to open bank accounts

Governments can implement incentives that encourage informal workers to open bank accounts. These incentives may include eliminating minimum balance requirements, reducing maintenance fees, and simplifying account opening processes. Relaxing the requirements for opening bank accounts can be effective in attracting the informal population into the formal financial system.

Financial education and awareness programs

Lack of knowledge about the benefits and functioning of financial services is a significant barrier to banking in the informal economy. Governments can implement financial education programs that instruct informal workers on how to use banking services, manage credit, and plan for their financial future. These programs may include workshops, awareness campaigns, and educational materials adapted to different literacy levels. Financial education empowers individuals to make informed decisions and trust the formal financial system. According to the aforementioned World Bank report, financial education is essential to improve financial inclusion and should be an integral part of public policies.

Public-private collaboration

Collaboration between the public and private sectors is essential for designing financial products that meet the needs of the informal economy. Financial institutions can work with the government to develop services such as microcredit, affordable insurance, and flexible savings accounts. In addition, the implementation of regulatory frameworks that promote financial innovation and protect consumers is crucial to building trust in the financial system. A report by the Alliance for Financial Inclusion (*Bringing the Informal Sector Onboard*) highlights the importance of inclusive public policies and multi-stakeholder collaboration to effectively incorporate the informal sector into the formal financial system.

5. Credit, demographic changes, and population aging

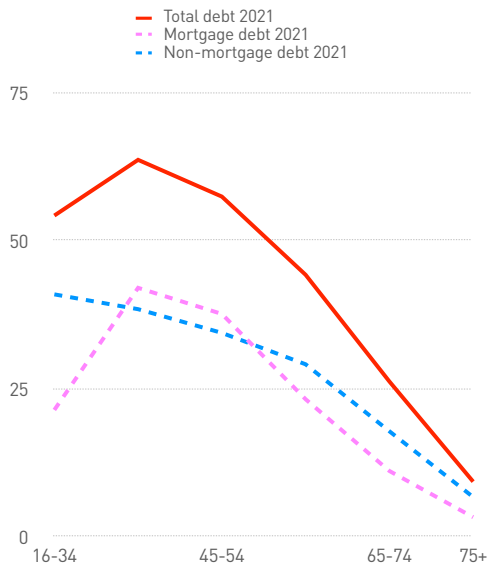
The changes occurring in demographic trends since the end of the 20th century, characterized by a sustained drop in birth and mortality rates, and their resulting impact on life expectancy, influence the composition of the population by age group. This shift in the population's age structure in many developed countries, and ever more so in emerging ones, is identified by the progressive aging of the population, with a greater proportion of people in cohorts reaching retirement age, who also benefit from an increase in life expectancy. This means that the ratio of labor force to persons reaching retirement age has been on a downward trend for more than four decades (more markedly so in developed economies), and estimates indicate that it will continue to drop significantly in the coming years, as the baby-boom generation reaches retirement age. Thus, as a consequence of population aging, the proportion of people capable of generating income will stop growing.

This demographic change also has implications for bank credit. Most studies on this subject conclude that population aging results in a contraction of bank credit, largely due to the lower risk appetite of older individuals, the decline in household savings rates, and the reduced willingness of banks to take on risk as a result of population aging. Credit demand often follows a *life cycle* profile, with the peak in demand coinciding with the productive age of young workers. Demand then drops to relatively low levels toward the end of a person's working career. Another consequence of population aging (as noted by some authors based on an analysis of the Chinese market) is that it leads, on the one hand, to a shift in the bank lending portfolio, with a contraction in corporate lending, credit lending, as well as lending to the manufacturing and real estate sectors, and, on the other hand, an expansion of retail lending.[7]

In contrast to the life cycle theory, some researchers who have studied periods prior to the 2008 global crisis argue that older individuals tend to consume more than younger people and use various forms of credit, mainly because they have purchased more expensive homes with lower down payments.[8] Similarly, a study conducted on the over-65 population in counties in the U.S.[9] for the 1997-2007 period provides evidence on how population aging affects bank lending standards. Based on this analysis, they argue that banks with greater exposure to aging counties relax lending standards, and also note that these banks experience a sharper increase in nonperforming loans during recessions, which implies an increase in credit risk. Two key factors drive these behaviors. First, an increase in banks' available funds due to the greater propensity of the elderly to save in the form of deposits and, second, a decrease in local demand for credit induced by the aging of the population. Other studies emphasize the economic risk faced by the middle-aged and elderly population, due to rising housing costs in many countries that push many households to take on more mortgage debt for longer periods of time. Meanwhile, the liberalization of financial markets in most countries is making credit more accessible to many households.[10]

In the Eurozone, a region undergoing accelerated population aging, nearly half (42.9%) of all households were in debt in 2021, including mortgages, loans, overdrafts, and credit card debt. It should be noted that this figure remains virtually unchanged from 2017

Chart 5.1
Eurozone: share of household debt
(% of households)



Source: MAPFRE Economics (based on BCE data)

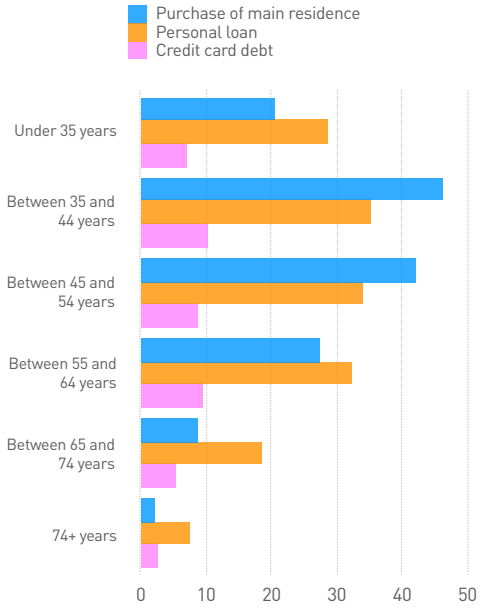
for both mortgage debt (23.7%) and non-mortgage debt (27.9%) participation rates. Mortgage debt remains by far the largest component of the household debt portfolio.

In general, fewer older households are in debt than those of younger generations. Thus, while 9.3% of Eurozone households with a reference person (the person with the highest household income) aged 75 or older were in debt in 2021, this proportion rises to 63.6% for households where the reference person is between the ages of 35 and 44. The same is true for mortgage debt, which is mostly concentrated in households between the ages of 35 and 54. Of households with a reference person aged 65 to 74, 11.1% have mortgage debt, a percentage that decreases to 3.3% of households over 75 years old. It should be noted that this ratio increases to 42% in households where the reference person is 35 to 44 years old, and to 37.6% in households where the age of the reference person is 45 to 54.[11] (see Chart 5.1).

Spain

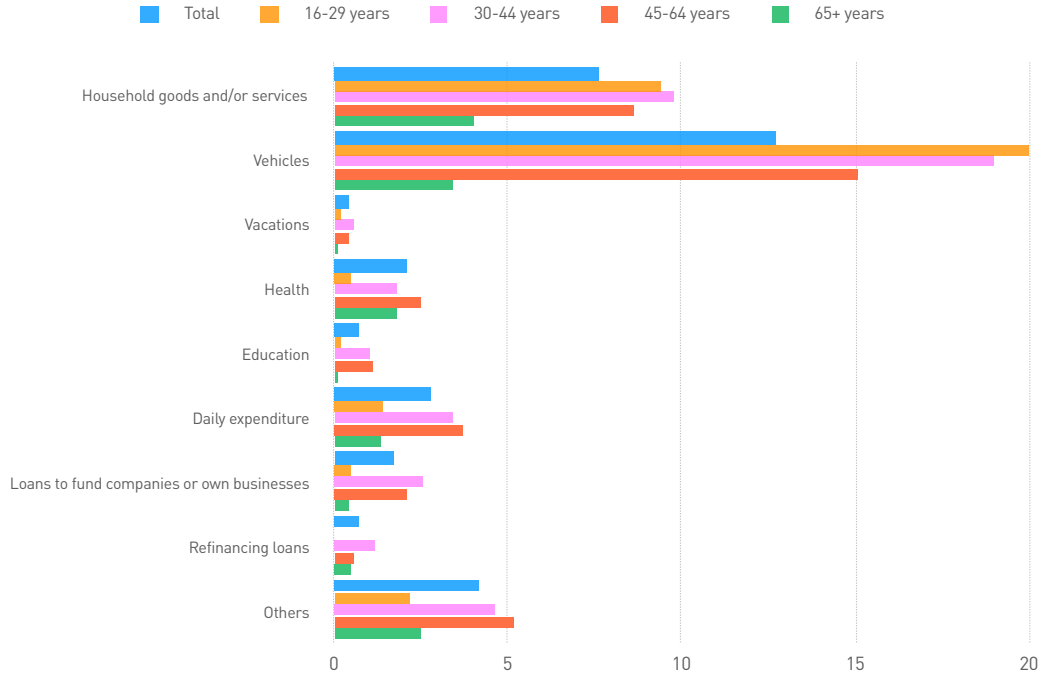
In Spain, at the end of 2022, 57% of households had some form of debt. Sixty-six percent (66%) of debt was dedicated to the purchase of a primary residence, 16.9% to the purchase of other real estate properties, and 17% to other debt (secured loans, personal loans, credit cards, and other debt). The probability of being in debt increases up to the 35-44 age group (76.5%) and falls thereafter, reaching the lowest level in households where the head of the household is older than 74 (16%). It should be noted that, with respect to outstanding debt for the purchase of a primary residence, there is a shift in the trend that has also been observed in other developed countries. Debt levels have increased among households whose head of household is between 45 and 54 years of age, reflecting the aging of the indebted cohorts, and decreased in households where the head of household is younger than 45 years old. This change could reflect the decline in the proportion of young

Chart 5.2
Spain: household debt, by age range, 2022
(%)



Source: MAPFRE Economics (with data from the 2022 Household Financial Survey, Bank of Spain)

Chart 5.3
Spain: distribution of household debt by age ranges, excluding mortgage loans
(%)



Source: MAPFRE Economics (with data from the Living Conditions Survey, 2020 module, National Statistics Institute of Spain)

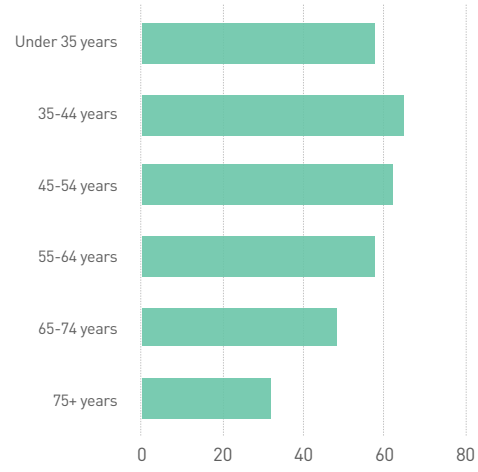
households in Spain, due to the drop in fertility rates since the mid-1970s and the delay in the age of emancipation, together with the aging of the baby boom generation[12] (see Chart 5.2).

Other types of debt, in order of importance, are the purchase of vehicles and other durable goods, business financing, home improvements, and debt cancellation. Of these, the most common form of debt among households was personal loans, which were used by 27.4% at the end of 2022. The groups least likely to use personal loans include the lowest income, those whose head of household is over 64 years of age, retirees, and households where no member is working (see Chart 5.3).

Latin America

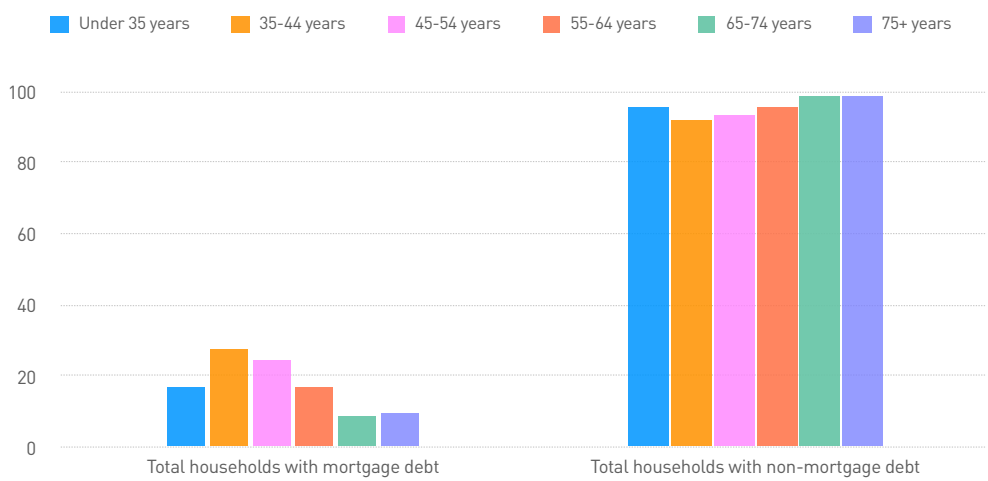
In Latin America, the countries with the highest household debt to GDP ratios are Chile (46.5%), Honduras (35%), Brazil (34.6%), and Colombia (28.6%).[13] In Mexico, 56.9% of households had some type of debt, where mortgage debt reached 11.6%

Chart 5.4
Mexico: households with some form of debt, by age ranges, 2019
(%)



Source: MAPFRE Economics (based on INEGI data)

Chart 5.5
Mexico: household debt, by age range, 2019
(%)



Source: MAPFRE Economics (based on INEGI data)

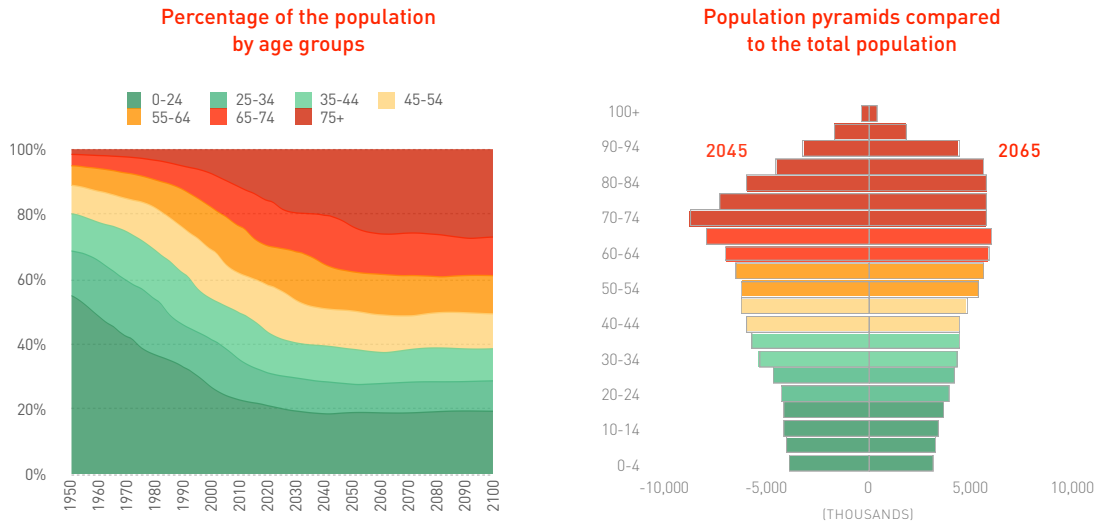
and non-mortgage debt (credit cards, loans, payroll, or personal loans, etc.) 53.8%. Chart 5.4 shows the distribution of total debt by age bracket for Mexico, where the highest percentage is concentrated in the population between 35 and 44 years of age (64.8%) and the lowest in households where the reference person is over 75 years of age (31.4%).

Chart 5.5 also shows the percentage distribution of the types of debt (mortgage and non-mortgage) by age bracket in Mexico. Within mortgage debt, the primary residence has the greatest share of the total, compared to other properties such as buildings, land, or offices. It should be noted that, as the population ages, participation in this type of debt tends to be lower. On the other hand, with respect to non-mortgage debt, all age groups have participation rates of around 95%, where credit card debt is the most concentrated, reaching 60.2% of total debt (94.5%).[14]

United States

In the U.S., consumers owed 17.1 billion dollars in total debt as of Q3 2023.[15] Of that debt, 11.6 billion dollars was for real estate and another 1.5 billion dollars was owed on vehicle loans. But the most notable movement in the consumer credit markets of late remains credit card debt, with total balance growth of 17.4% in 2023, to just over 1 billion dollars. Across all generations, older consumers began to reduce some of their total debt in 2023, while 27- to 42-year-olds saw their debt balances grow by 8% and 18- to 26-year-olds by 15.4%, the latter largely due to younger consumers taking on new student loan and credit card debt for the first time. The 43 to 58-year-old generation, meanwhile, recorded a modest 1.9% increase in 2023. It should be noted that credit card charges by age are divided into three groups. Of these, the older and younger generations, for different reasons, have significantly lower average credit card balances than the overall average.

Chart 5.6
Japan: distribution of the population by age

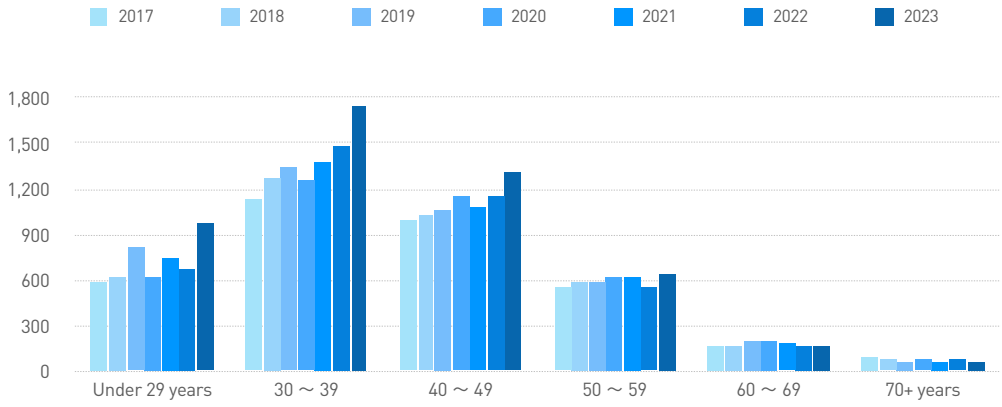


Source: MAPFRE Economics (based on data from the United Nations)

Japan

Finally, Japan can be considered a paradigm, with stagnation in household and corporate lending, and even some periods of decline, in its historical series since the 1990s. This is a country that, in addition to having faced a real estate and banking crisis in those years due to excessive lending, is undergoing a marked population aging process that is expected to continue in the coming decades (see Chart 5.6). In addition, Chart 5.7 shows the amount of debt for households with two or more persons for home purchases in Japan, distributed by age,[16] which reflects how it decreases for older cohorts.

Chart 5.7
Japan: amount of debt maintained by households of 2 or more persons, for housing purchases (per 10,000 yen)



Source: MAPFRE Economics (based on data from the Japanese Statistics Institute)

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3/ See: MAPFRE Economics (2024), *Savings and Insurance Industry Investments: an Update*, Madrid, Fundación MAPFRE.

4/ See: https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/capital-markets-union_en

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28004 Madrid