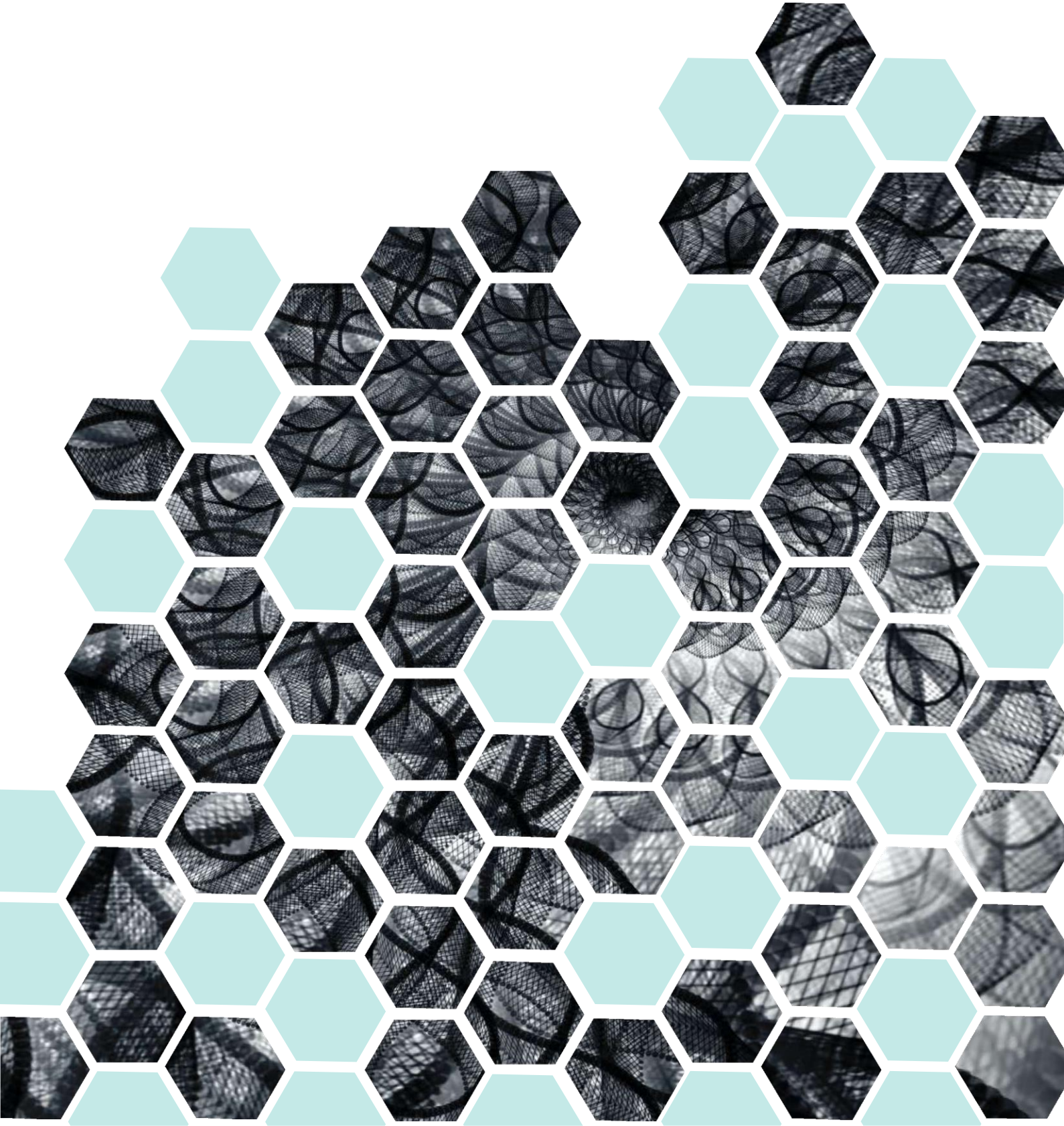
FINANCIAL SUPERVISORY AUTHORITY

REPORT ON THE NON - BANK FINANCIAL MARKETS STABILITY

2/2020



Note

The analyses in the report are mainly based on the financial reports of the entities supervised by ASF until the reference date October 31, 2020, as well as on other data and information on financial markets (IMF-World Economic Outlook, EC, NCSP, NIS, NBR) available until this date. As a result of rounding, the totals may not correspond exactly to the sum of the components or there may be small differences from the percentage variations indicated in the graphs or tables.

The report on financial stability was prepared within the Strategy and Financial Stability Department.

The report was analyzed by the Board of the Financial Supervisory Authority and approved in the meeting of December 3, 2020.

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FOREWORD

Promoting financial stability is a key objective of the Financial Supervisory Authority. In an unstable financial system, adverse events are more likely to induce severe financial stress and disruption to non-bank financial market activities.

The Financial Stability Report, together with the monitoring and evaluation of financial stability, is an important element to ensure the quality of the process of regulation and supervision of non-bank financial markets. Based on emerging risks, the information collected during the monitoring of the financial system stability helps to better address the key risks to be included in the stress test scenarios and in establishing the main supervisory indicators. In order to assess the risks and vulnerabilities of the insurance, capital market and private pensions sectors, the Financial Supervisory Authority uses both quantitative and qualitative instruments in its activity.

A stable financial system, even if it may be affected by adverse events or shocks, continues to play its role according to consumer requirements. Instead, in an unstable system, the same shocks would have much greater effects, disrupting the normal flow of non-bank financial markets and leading to declines in economic activity.

The policies and procedures underlying financial stability are aimed at limiting the effects of contagion and preventing the excessive accumulation of risks. The continuous monitoring of the financial markets carried out by the Financial Supervisory Authority differentiates the shocks from the vulnerabilities of the financial system. If markets are vulnerable, any shock can have a multiplier effect. Risk management provides an ongoing way to assess the stability of non-bank financial markets, but there are situations where the effect of shocks is not immediately identifiable because they are new or sometimes difficult to quantify. Some vulnerabilities can be difficult to measure with currently available data, and their complexity and diversity can evolve over time, which is why the Authority's approach is flexible and proactive.

Given the ongoing transformations in financial markets, we rely on ongoing analysis and research by Financial Supervisory Authority staff, but also on collaboration with other institutions, to improve the identification of existing or potential risks and to keep pace with the changes of the financial system that could lead to new forms of vulnerabilities that can be added to existing ones.

Prof. Nicu MARCU, PhD

Chairman of the Financial Supervisory Authority

Introduction

The word, in any form, is still the basis of our trade relationships in non-bank financial markets, therefore protecting its integrity is paramount to the stability of supervised markets. A critical situation can push human behavior in different directions, some aspects of the behavior being irrevocable. Along with economic instability, consumers are also facing a transformation of behavior, although it is a question of how much of the transformation experienced during the crisis will be sustained.

In this period since the beginning of the pandemic, when digitalization has evolved rapidly and the EU regulatory framework is also constantly changing, maintaining the integrity of our non-bank financial markets is critical. Human interaction, although limited, is as important to the financial ecosystem now as it was before the pandemic. Instead, the challenge of overseeing such human (virtual) interaction has increased as the various forms of remote contact have expanded.

Recent risk supervision focuses on the growing volume of electronic interactions. Data supervision, although trivial, is systematic and deterministic and therefore easier to monitor. However, various problems can occur in many other places in the life cycle of a non-bank financial product. While human interaction is generally perceived to be diminished, monitoring the risk and compliance of such an activity is no less important than for electronic flow and is feasible given the appropriate systems and controls.

Simple, basic standards of business morality and etiquette have been ingrained in the most developed markets for hundreds of years. It is important that they do not fade and that we maintain them as we move into a different era of business and digitalization, in which communication and interaction with our colleagues and partners will change and adapt.

COVID-19 leads to a paradigm shift for key risk components and determinants, changing the risk profile of many asset classes. The evolution of the pandemic and its economic repercussions are deeply ambiguous, which can be a challenge for taking the perfectly adapted microprudential and macroprudential measures. However, through the measures proposed by the Financial Supervisory Authority, in conjunction with those taken by all supervised institutions, the risks have been reduced, so that financial markets in Romania, so far, have shown good resilience to the shock of the pandemic.

Economies extremely dependent on foreign trade are the most affected. Given that the pandemic and its economic fallouts are extremely unpredictable in many respects, the global economy currently faces the most difficult period in history.

The analyses and scenarios in this paper illustrate how local non-bank financial institutions could be impacted in the short and medium term, given the risks and vulnerabilities presented at the integrated level, but also separately on insurance, pensions or the capital markets.

Valentin IONESCU

Director of the Strategy and Financial Stability Department

Synthesis

The non-bank financial markets in Romania have shown a good resilience to the shocks that hit the European economies this year, provoked by the emergence of a new risk, namely the COVID-19 pandemic.

The first nine months of 2020 were dominated by a high degree of uncertainty that spread rapidly in the financial environment, with capital markets registering sharp declines between March and April amid rising volatility and contagion effects. The situation did not last long, the markets absorbing the shock, balancing and then integrating new expectations in the medium term. The short-term impact was felt more strongly in the investment fund industry, which recorded net capital outflows in April, after which they returned to positive territory. The insurance market was not significantly affected either, as the main insurers did not have large exposures on products directly affected by the pandemic restrictions. The private pension system has also faced challenges even in adverse conditions, far outstripping the shock and still achieving positive returns for its participants.

Although non-bank financial markets have adapted well to the current context, the impact of the pandemic still persists on the real economy, which is going through a global stage of structural transformations, implemented in a short time, determined by the need to reduce losses and adapt to the new challenges emerging in all economic fields. The effects of the crisis were strongly felt by the global and European economy, especially in the second quarter, although states quickly implemented a series of fiscal measures to support the economic sectors affected by the crisis, and central bank efforts were channeled to maintain financial stability by lowering interest rates and providing liquidity in the markets. Social restrictions introduced by states to prevent the spread of the virus and the rapid change in consumer behavior have significantly affected all economic activities, especially the services sector based on direct interaction with consumers: tourism and hospitality in general, retail, art and entertainment. The fiscal and monetary response of the states has been faster and more comprehensive than in the 2008-2009 financial crisis. Governments initially adopted measures to protect the incomes of households and businesses heavily hit by the crisis, and after lifting restrictions, they introduced measures to stimulate demand. However, the EU and Euro area economies recorded in the second quarter of 2020 the most severe contractions since 1995. The outbreak of the second wave of the pandemic in the fourth quarter of 2020 triggered new challenges in managing the medical situation, new quarantine areas and restrictions, while supporting the economies. The widespread digitization and implementation of telework in areas where it is possible have greatly contributed to the continuation of activities and to the reduction of new shocks that disrupt or disturb production and distribution systems.

The Romanian economy had a milder evolution in the first quarter of 2020 compared to other European countries, which registered severe contractions, but the stronger shock was visible in the second quarter, with the isolation and quarantine measures established by the state of emergency of April-May 2020. Although the local economic model was based on private consumption stimulated by increasing household incomes, the current crisis is expected to lead to adjustments in disposable income and, therefore, consumption behaviors, along with a growing trend of saving, where possible. The labor market has also been affected, the uncertainty about the future evolution of unemployment contributing to maintaining the risks of future economic recovery. A vulnerability

of the Romanian economy in the current crisis is represented by the increase of current and budgetary account deficits, in the context of increasing public spending to mitigate the negative impact of the pandemic, while reducing budget revenues due to weaker economic activity.

Externally, financial markets were characterized by an increase in systemic risk, amid high volatility, followed by a slight moderation in the third quarter. The financial market in Romania also showed a high level of stress. Thus, at the end of October 2020, all BVB indices had negative annual yields, the largest decrease, of approximately 19%, being registered by BET-NG, the index of companies in the energy sector.

The stability of financial markets has been a priority on the European agenda, in order to avoid the materialization of systemic risks and, implicitly, of other shocks from the financial sector to the economy. Thus, the ESRB, as the European authority responsible for the macro-prudential oversight of the EU financial system, identified five priority areas where the crisis could have negative effects from a macro-prudential perspective: implications for the financial system of public guarantee schemes and other fiscal measures meant to protect the real economy, the lack of liquidity of financial markets and the implications for asset managers and insurance companies, the impact of downgrades of corporate bonds ratings on financial sector markets and entities, restrictions on the payment of dividends, redemptions of shares and other voluntary payments and liquidity risks resulting from margin calls. At the same time, the EU Council set an economic recovery plan in Europe worth EUR 750 billion and a budget for the period 2021 - 2027 worth EUR 1,074 billion. Funding will be aimed at facilitating the green and digital transition, strengthening potential growth, creating new jobs and the economic and social resilience of Member States. In order to finance the necessary investments, the European Commission will issue bonds on the financial markets on behalf of the EU, the efficient functioning of EU capital markets becoming crucial. In this context, in September 2020, the European Commission published a new Action Plan to boost the Capital Markets Union (CMU), which has as main objectives to simplify the rules for access to finance by European companies, encouraging savings and long-term investment and the integration of national capital markets into a single European capital market.

The main European financial supervisory authorities (ESMA, EIOPA) indicated a significant increase in market, liquidity, credit and solvency risks, while the investment fund industry faced a deterioration in asset liquidity combined with capital outflows of certain classes of assets. At the same time, the effects of the pandemic included also increasing concerns about the profitability of all financial sectors, in a context in which low interest rates will continue to persist. Recent developments have shown that uncertainties about the medium- and long-term economic consequences of the pandemic are still high, and financial markets are vulnerable to a potential decoupling from the core economic activity, questioning the sustainability of the recent financial market recovery. Under these conditions, the potential for a sudden reversal in investor risk assessment is a key vulnerability for EU financial markets. Accelerating the digitization of financial services is an overall positive trend in terms of lowering costs, but there are also risks that need to be closely monitored to prevent security breaches, such as cyber risk, high market concentrations among data service providers and potential vulnerabilities in the Fintech sector. In the field of insurance at European level, the unexpected outbreak of the pandemic underlined the importance of the Solvency II regime, as the risk-based approach allowed for better capitalization of insurance companies, while adjusting long-term guarantees reduced market volatility associated with the current crisis, reflected in the own funds, respectively in the solvency capital requirements. Solid capital buffers have supported

insurance companies to withstand severe initial shocks. However, uncertainties persist and the environment of long - term low yields remains, posing a fundamental risk to the European insurance and pension sectors. The economic downturn will have a negative impact on companies' profitability, favoring ratings downgrades, rising bankruptcy and unemployment, and the interconnection between insurance companies and credit institutions could propagate spillovers of the risks from the real sector to insurers and pension funds. The main risks identified by the insurance industry at European level referred to: profitability of investment portfolio, solvency position, exposure to banks, underwriting profitability and concentration to domestic sovereign and and cyber risk. After a year of positive returns, EU occupational pension funds have been heavily hit by market turmoil in the context of the COVID-19 pandemic. It is further estimated that they will be affected by market volatility, by the deterioration of asset values in an environment of low interest rates and funding and liquidity concerns as a result of suspended or low contributions from sponsors and members. It is expected that there will be situations of insolvency among sponsors in the sectors affected by the pandemic restrictions, and that the members of these pension funds will go into unemployment, testing the resilience of the national pension protection schemes. Overall, in EU occupational pension schemes, the COVID-19 crisis can reduce members' benefits, putting pressure on the need for sponsorship funding and, implicitly, on the real economy.

At national level, private pension funds remain in an area of medium to low risk, with a declining trend. The architecture of the private pension system in Romania based on defined contributions is a solid one, with multiple protection mechanisms for participants. The investments of the pension funds are made prudently, over 67% of the assets being placed in securities issued by the Romanian state. Thus, credit risk is low and connected with country risk, while market risk is diminished by diversifying investments. The revision of the legislative provisions in Pillar II regarding the level of charged fees affected the profitability of the administrators, who obtained negative financial results. As Pillar II is still in a phase of accumulation, losses are expected to be recovered in the future, as assets and the value of contributions increase, in the context of maintaining legislative predictability. As a whole, for structural reasons, the risk of concentration is high, both for pension funds and for the services of depositing their assets.

On the Romanian insurance market, the risks are at a medium level, but with an increasing tendency, due to the effects of the uncertainty generated by the global crisis. Business risk has increased due to the evolution of the pandemic, while profitability and solvency risks have remained at a medium level, although maintaining low interest rates may have a double impact on assets and liabilities, in particular on life insurers, with negative consequences on the solvency and on the financial position of companies. Total assets had a positive dynamic, causing an increase in the surplus of assets over liabilities, which is the main component of Tier 1 items related to own funds eligible to cover capital requirements, according to the Solvency II regime. The evolution of the combined ratio in the first half of 2020 indicated a slight improvement in profitability in the non-life insurance segment, but continues to remain in the supra-unitary territory for the main CASCO and MTPL - CMR insurance classes. The risk of concentration remains high, both in the entire insurance market and in the main classes of life and non-life insurance.

On the Romanian capital market, the risks are at a high level with a tendency to increase, especially due to the particularity of the stock exchanges to react immediately, even anticipatively, to any disturbing factors in the economy and not only. The Bucharest Stock Exchange had an annual increase in the traded value, but its capitalization has not yet managed to catch up with the slumps

from the first wave of the pandemic. Between June and August, the contagion continued to decline, simultaneously with the process of easing the lockdowns imposed by the all the European states and in September it returned to the long-term average. With the outburst of the second wave of the pandemic, the contagion began to grow in October and the trend is expected to continue as a result of the reintroduction of quarantine and social distancing measures in several European economies. The investment funds market faced massive withdrawals in April, but the trend flattened with the end of the state of emergency. In the context of uncertainties about future pandemic restrictions, we may be witnessing other episodes of pressure on fund liquidity by increasing withdrawals, although they may apply legal liquidity management tools. The investment fund market also maintains a high level of concentration of depositary's services.

The analysis of interconnection and contagion at EU level provided important clues about the speed of absorbing economic shocks by some economies, based on industrial production indices / index, two groups of economies being identified in the EU. The first group includes Luxembourg, Croatia, Portugal, Cyprus, Greece, Italy, Sweden, France and Ireland, and the second contains Germany, Belgium, Slovenia, Latvia, Lithuania, Bulgaria, Austria, Poland, Estonia, Hungary, the Czech Republic, Slovakia, Romania and Spain. The response transmitted by the contagion was rapid among European economies, with a change in the business cycle. The less developed economies in the second group absorbed asymmetric shocks amid pre-existing structural economic problems, which allowed for the rapid expansion of economic shocks. Globally, early warning indicators showed the US entering recession in the first quarter of 2020. In fact, financial stress indicators also show the US as the region with the highest potential for economic instability compared to other advanced economies and emerging markets. At European level, the indicators for the degree of confidence in the economy changed their trend in May, after experiencing the strongest decreases in March and April, starting to increase between June and September 2020. Despite the heterogeneity between markets, the contagion has spread rapidly to both emerging markets and other advanced economies, outpacing the speed with which capital markets have responded to financial market tensions over the past 10 years. In fact, the deterioration of the sanitary evolution confirmed by the occurrence of the second wave of the pandemic determined the beginning of some decreases on the capital markets in October, as a result of the re-imposition of social distance measures and the return of the economic activity reduction expectations.

Overseeing the level of interconnection between financial markets in Romania by analyzing balance sheet exposures between sectors or between individual entities showed relevance to several main classes of assets and the markets in which they are traded: government securities, bank deposits and shares. The capital market, represented by open and closed-end investment funds, Fondul Proprietatea and financial investment companies, holds a share of about 30% of listed shares as of June 30, 2020. At the same time, private pension funds held a percentage in the investment portfolio of about 19% in listed shares, and insurance companies a percentage of 0.4% in listed shares.

We appreciate that the interconnection of the entities supervised by FSA with the stock markets has a medium to small scale. The largest exposure to the banking sector is held by collective investment undertakings, which hold a 9% share in bank deposits, while private pension funds and insurance companies hold shares of 4% and 3% in bank deposits, respectively. We consider the level of interconnection with the banking system (in terms of balance sheet assets) as low. The network of exposures of the entities from the non-bank financial markets shows that, in the case of all the three

non-bank financial sectors supervised by FSA, the main risk exposure is towards the Romanian state, through the sovereign bonds held in the portfolio. Thus, government securities are held in the investment portfolios of collective investment undertakings in a percentage of about 22%, in a percentage of 66% are found in the investment structure of private pension funds, and insurance companies have invested 39% of their assets in government securities.

In the sovereign bond market, the contagion between government bond yields rose sharply and intensified in the first quarter of 2020, in February and March, surpassing in speed previous episodes of the spread of the contagion between European economies. The index of contagion for government securities has increased, as a result of the risk aversion coming from investors who left the stock markets and bought government securities, but also against the background of the measures taken by the European Central Bank to increase market liquidity.

The analysis of the net contagion, measured by the difference between the received contagion and the transmitted contagion and the relevant indicator for the sovereign bond market, shows that Romania, Bulgaria and Hungary receive net contagion, while Spain, Italy, Belgium, France and Ireland transmit net contagion. Romania receives 45% on average contagion, while Italy is the country that transmits the most contagion, being the third largest economy in the world in the bond market.

Overall, the financial stability indicator calculated by the FSA for the three supervised markets, taking into account the dependence between the three sectors, confirms a deterioration in financial stability in the first two quarters of 2020.

The analysis of the three independent guarantee mechanisms for non-bank financial markets (Investor Compensation Fund, Policyholders Guarantee Fund and Private Pension System Rights Guarantee Fund) indicated the maintenance of low risks from the perspective of financial stability. Of these, the Policyholders Guarantee Fund is the one that has continued to make significant payments in recent years due to the bankruptcies of some insurance companies. It has demonstrated a prudent approach in the management of the resources collected according to the applicable legal provisions, as well as the development of an adequate operational capacity for the administration of payment claims following the past bankruptcies that took place on the insurance market. However, the high degree of concentration present in both the non-life and life insurance segment, as well as the large number of people included in compulsory and optional insurance, increase the risk on the stability of the PGF in the hypothetical situation of bankruptcy of a company with high market share.

From a macroprudential perspective, the Financial Supervisory Authority maintained the instruments implemented at the level of the three markets and continued the periodic analysis of the identified risks and vulnerabilities. This year, the National Committee for Macroprudential Oversight (NCMO) issued two recommendations applicable to the Financial Supervisory Authority. The first transposes an ESRB recommendation on restricting the distribution of dividends, the buy-back of ordinary shares or the making of voluntary payments by insurance companies, investment firms and central counterparties. Based on the applicable legal provisions, the Financial Supervisory Authority issued a set of Recommendations for insurance and reinsurance companies on measures to minimize the effects of the COVID-19 crisis, taking into account: the need to maintain a sufficient level of own funds to help reduce systemic risk and economic support; the negative effects that the COVID-19 crisis could have on the solvency of companies by decreasing subscriptions and increasing obligations due to maintaining low interest rates, respectively by the low return on assets. Out of a

total of 26 insurance-reinsurance companies, approximately 83% complied with the recommendations issued by ASF, and 15% expressed the intention to comply. Given the size of the market, the financial results obtained and the level of capitalization of investment firms, FSA opted for the individual application of the recommendation if there are indications that investment firms do not meet or will not meet capital requirements in the next 12 months. The second recommendation issued by the National Committee for Macroprudential Oversight concerns the monitoring of the financial stability implications of measures on credit moratoriums, public credit guarantee schemes and other fiscal measures taken to protect the real economy from the effects of the COVID-19 pandemic. The Financial Supervisory Authority has adopted a series of micro-prudential measures in response to the COVID-19 pandemic, but these are not of a fiscal nature and are not subject to the CNSM Recommendation. At the same time, the fiscal measures adopted by the Romanian Government do not directly target the entities regulated by the FSA.

The evolution of the European context focuses on several strategic areas for the future. The European Commission has recently adopted the "Digital Finance Package", which includes the strategies for the Digital Finance and Retail Payments, as well as new legislative proposals on crypto-assets and digital resilience. The aim is to provide legal clarity and certainty to issuers and providers of crypto-assets, in order to help capitalize on opportunities and reduce risks in this new field.

A comparative analysis of financial inclusion using a multidimensional index of financial inclusion places Romania on the last place in the sample of selected countries, taking into account financial, banking, insurance, private pensions and investment funds markets. This position is due to a still very small size of non-bank financial markets in Romania.

At the same time, the European Commission reiterates its commitment to responsibly address climate and environmental issues through the European Green Deal, which points to a new growth strategy aimed at transforming the EU into a fair and prosperous society with a modern, competitive and resource efficient economy, where there are zero gas emissions by 2050 and where economic growth is decoupled from resource use. In this context, the role of the financial market, both banking and non-bank, will be important by ensuring the financing of environmentally sustainable economic projects. In the medium and long term, institutional investors (investment funds, insurance companies, private pension funds) will be involved in the implementation of this strategy, and public investments will be channeled to sustainable projects.

1. Analysis of the local and international macroeconomic and financial context

During the first half of 2020, economic and financial developments at European and global level were marked by a high degree of uncertainty and volatility, especially as a result of the COVID-19 pandemic outbreak, with medium and long-term impact on the activities and economic balances, respectively with short term effect on the variables that characterize the financial markets.

Although states quickly implemented a series of fiscal measures to support the economic sectors affected by the COVID-19 crisis, and central bank efforts focused on ensuring financial stability through interest rate cuts and market liquidity, the effects of the crisis were heavily felt in the global and European economy, especially in the second quarter of 2020. Measures introduced by states to prevent the spread of COVID-19, recommendations on social distancing and medium-term change in consumer behavior have significantly affected all economic activities, especially the services based on direct interaction with consumers: tourism, hospitality industry in general, wholesale and retail trade, art and entertainment.

Internally, the economy suffered less in the first quarter of 2020 compared to other European countries, especially developed ones, which saw severe contractions. Economic activities were more severely impacted in the second quarter of 2020 amid the negative effects of the crisis generated by COVID-19, given that the quarantine measures imposed by the Romanian state, mainly targeted the interval April - May 2020, a period marked by the establishment of the state of emergency on the Romanian territory. Although the economic model was based on private consumption stimulated by rising household incomes as a driver of economic growth, the current crisis will cause a contraction in private consumption as a result of reduced disposable income and adjusting consumption behavior, in the sense of a potential increase in saving, a trend observed at EU level. The crisis generated by the pandemic and the effects of lockdowns have led to a worsening of the labor market in Romania, with a disruption of the downward trajectory of the unemployment rate, contributing to the accumulation of risks regarding future private consumption and therefore economic recovery. The reduction of aggregate demand and disposable income and the broad contraction of oil prices have induced disinflationary pressures, but partially offset by the shock on the supply side. A vulnerability of the Romanian economy remains related to the increase of current and budgetary account deficits. The deepening of the budget deficit will take place in the context of the increase of public expenditures in order to mitigate the impact of the current crisis, simultaneously with a reduction of the budget revenues determined by the economic activity contraction.

1.1. International macroeconomic and financial developments

The year 2020 began with an escalation of geopolitical tensions between the US and Iran, but the peak, with significant socio-economic impact, was the outbreak of the COVID-19 pandemic, which has become the biggest source of global economic concern since the global financial crisis. The new coronavirus burst in December 2019 in China, spreading rapidly in January in that region. Although initially it led to a sharp slowdown in China, the spillovers spread through financial markets and commodity channels, resulting in massive declines in energy prices (especially oil) and metals, affecting global trade flows – against a background of a much lower demand from China - and the decline in tourism - as a result of strict state-imposed containment measures.

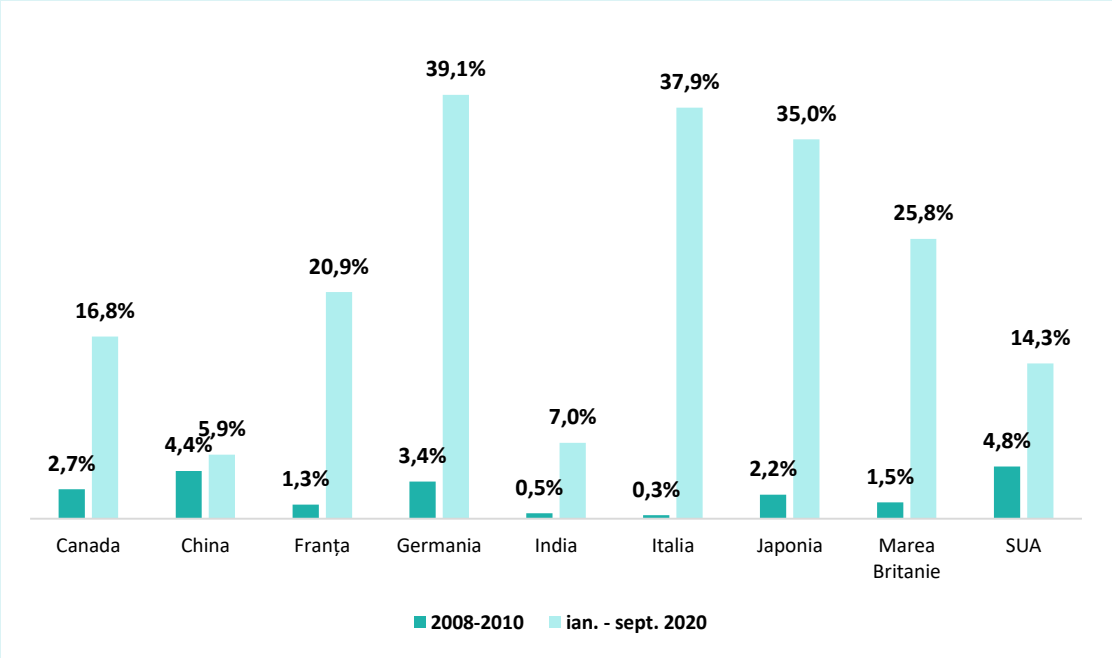
The macroeconomic outlook in the first half of 2020 was strongly influenced by the negative effects generated by the COVID-19 pandemic, amid an already weakened global economy since 2019, when there was a slowdown in global economic growth (+2.8%), according to IMF estimates, the highest since the financial crisis. However, the fiscal and monetary response of the states was faster and more comprehensive than in the case of the 2008-2009 financial crisis. Governments initially responded with measures to protect the incomes of households and businesses severely affected by the COVID-19 crisis, and subsequently, as restrictions were lifted, states introduced measures to stimulate demand.

Comparison between the global financial crisis of 2008 and the one generated by the COVID-19 pandemic

There are some significant differences between the 2008 and 2020 crises:

1. **Source of shock** - if in the case of the crisis of 2008 the source was endogenous to the financial system, being generated by non-performing loans and their securitization, in 2020 the crisis was exogenous, coming from outside the financial system.
2. **Robustness of the financial system** - at the beginning of 2020 the financial system was solid, being able to cope with shocks, while in 2008 the financial system was fragile, with internal problems. In addition, the effects of regulations strengthening following the 2008 crisis have further reinforced the financial system to deal with unexpected shocks.
3. **Spreading speed** - the first signs of the last decade crisis appeared as early as the second half of 2007, but it took a while for the crisis to spread globally, culminating in the bankruptcy of Lehman Brothers in September 2008. Stock markets reached a minimum in Q1 2009, after a period of 17 months of decrease. In contrast, the current crisis started and spread globally in a very short time, just a few months. For example, stock markets began to decline in February 2020, returning to previous levels at the end of May 2020. Of course, it is still too early to say that the financial system has overcome the crisis, especially given that we are in the second pandemic wave, and the WHO expects a third wave in early 2021.
4. **The reaction of the authorities** - was much more pronounced in 2020, the fiscal stimulus, for example, rising to above 10% of GDP, in some cases reaching almost 40% of GDP, while during the crisis in 2008, throughout the period, the fiscal stimulus totaled several percent of GDP. These are supplemented by extensive monetary easing measures.

Figure 1 Fiscal stimulus during the global financial crisis 2008 - 2010 compared to the COVID-19 crisis (% of GDP)



Source: IMF
https://www.imf.org/external/np/pp/eng/2009/020109.pdf
https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19

5. **Expectations regarding the form of recovery** - in 2008, we had a return in U, which means that the shock was permanent, the return of growth being on a lower trend than would have been recorded in the absence of the crisis. In the current situation, there is still hope for a return in V, which would mean a return to the pre-crisis trend. This hope is fueled by the exogenous nature of the shock, based on the assumption that, once the shock is removed, the recovery will be complete, especially given that both the economy and the financial system had no obvious structural problems. However, there are also voices that anticipate a return in the W or even in the U, arguing through the sharp contraction of global GDP and the signs of changes in the structure of the real economy, which will require adjustments.
6. **The magnitude of the economic impact** - the crisis of 2008 particularly affected developed economies, with global GDP remaining in positive territory. In contrast, the COVID-19 crisis seems to be affecting all countries, with global GDP declining, with the poorest countries being the most severely hit.

Evolutions of economic growth

Despite the rapid and comprehensive response of the states, the EU and euro area economies have strongly felt the effects of the crisis caused by the COVID-19 pandemic, having in the second quarter of 2020 the most severe contractions since 1995, since the introduction of the data series. After the yearly decreases of the seasonally adjusted GDP in the first quarter of 2020 by 2.7% in the EU and 3.3% in the euro area respectively, the European Union economy fell by 13.9%, while in the case of

the euro area, there was a contraction of 14.8% in the second quarter of 2020 compared to the same period of the previous year. Among the EU Member States, the most affected by the crisis caused by the COVID-19 pandemic were Spain (-21.5%), France (-18.9%) and Italy (-17.9%). In Spain, the most affected EU member state, the state of emergency was in force from mid-March to June 21, mainly aimed at restricting traffic for essential purposes only and limiting commercial, cultural and hotel and restaurant activities. Although the number of infections decreased steadily between April and July, the outbreak of the second wave increased the number of daily infections and exceeded the peak of the first wave, with expectations being that the second wave would be more severe compared to the first. In France the situation is similar. The effects of the second wave, which saw an increase in the number of infections, led to the introduction of the quarantine measure in October 2020 until at least the end of November, with the imposition of restrictions on traffic only for essential purposes and the closure of bars and restaurants. On the other hand, schools and factories will remain open during the lockdown period.

The UK economy registered a significant decrease by -21.5% in the second quarter of 2020 compared to the same period of the previous year. In the UK, the number of COVID-19 infections initially peaked between April and May, following a few weeks of decline. However, the second wave escalated, with the number of cases exceeding that initially recorded during the first wave.

At the opposite pole, among EU Member States, there are Ireland (-3.7%), Lithuania (-4.6%), Estonia and Finland (both -6.5%), countries where the effects of the COVID-19 pandemic on the economy was less severe.

Compared to the previous quarter, however, the seasonally adjusted GDP declined less in amplitude. In the European Union, the seasonally adjusted GDP fell by 11.4%, while in the euro area it fell by 11.8%.

Table 1 Evolution of GDP in the EU in the period 2019 – 2020

Region/Country	Q1 2019	Q2 2019	Q3 2019	Q4 2019	2019	Q1 2020	Q2 2020	Q3 2020
Euro area	1.5	1.3	1.4	1.0	1.3	-3.3	-14.8	-4.4
EU	1.8	1.5	1.7	1.2	1.5	-2.7	-13.9	-4.3
Germany	1.1	0.1	0.8	0.4	0.6	-2.1	-11.2	-4.2
Spain	2.2	2.1	1.8	1.7	2.0	-4.2	-21.5	-8.7
France	1.8	1.8	1.6	0.7	1.5	-5.8	-18.9	-4.3
Italy	0.4	0.4	0.5	0.1	0.3	-5.6	-17.9	-4.7
Bulgaria	4.2	3.8	3.3	3.1	3.7	2.3	-8.6	-5.2
Croatia	4.0	2.5	2.7	2.5	2.9	0.3	-15.5	-
Hungary	5.1	4.7	4.4	4.0	4.6	2.0	-13.5	-4.7
Poland	5.3	4.7	4.4	3.9	4.5	1.9	-8.0	-2.0
Romania	**5.4**	**3.6**	**3.4**	**4.4**	**4.2**	**2.6**	**-10.3**	**-6.0**
UK	1.7	1.3	1.0	1.0	1.3	-2.1	-21.5	-9.6

Source: Eurostat (percentage variation compared to the same quarter last year - seasonally adjusted data)

According to the flash data published by Eurostat, in the third quarter of 2020 the euro area economy returned to a growth rate of 12.6% (seasonally adjusted series), and the GDP of the European Union increased by 11.6% compared to the previous quarter. According to Eurostat, these have been the largest increases since 1995, when the data series was introduced. Compared to the

same period of the previous year, the EU economy contracted by -4.3%, while in the case of the euro area it decreased by 4.4% in the third quarter of 2020.

The shock generated by the COVID-19 pandemic overlapped with an already existing vulnerability at the level of advanced economies, but also of the emerging and developing ones, related to the very high level of public and private debts. Although public borrowing can have a positive impact on economic development, given that it is used to finance growth-enhancing investments, the high level of government indebtedness reduces room for maneuver in addressing unexpected shocks, such as the current sanitary crisis.

On the other hand, data for the period June-September 2020 suggested an improvement in macroeconomic conditions in the euro area and in the US, as the number of infections began to decline and states gradually lifted the measures taken to prevent the spread of COVID-19.

As of April 2020, the ZEW Economic Sentiment Indicator (6-month expectations) for the euro area has returned to positive territory, after reaching the lowest level (49.5 points) in March 2011, when Europe faced the sovereign debt crisis. After a peak of the first 9 months of 2020 reached in September (73.9 points), the high degree of uncertainty due to the accelerated increase in the number of new cases of COVID-19, the Brexit negotiations and the US presidential elections have led to a worsening of economic expectations for the euro area. Thus, in October 2020, economic expectations for the euro area fell by 21.6 points to 52.3 points.

Expectations of financial market experts also deteriorated in the US, where the ZEW indicator lost 16.9 points, reaching 53.2 points in October 2020, under the influence of the increase in the number of new cases of COVID-19, which fuels uncertainties on the future evolution of the economy.

The effects generated by the COVID-19 pandemic also had a severe negative impact on commodity price developments, leading to significant declines in oil prices, especially in March-April 2020, amid a sharp slowdown in demand, but also as a result of failure of OPEC + negotiations (OPEC and its partners) to reduce oil production. Although OPEC members and their partners (OPEC+) reached an agreement in April on reducing production volumes in order to limit declining oil prices, oil prices continued to fall. After a low in April 2020 (WTI: $ 11.57 / barrel; Brent: $ 19.33 / barrel on April 21), crude oil prices rose, supported by sharp supply cuts, but remained lower compared to those before the outbreak of the pandemic. Amid rising infections and decisions by states to reintroduce stricter measures to prevent the spread of COVID-19, with France deciding to reinstate the lockdown, Brent oil prices fell below $ 37 / barrel in late October, the lowest level since May.

Economic growth forecasts

In the context of the outbreak of the COVID-19 pandemic and of the effects of containment measures imposed by states, the socio-economic impact is major, especially due to expectations related to the medium-term maintenance of restrictions and the changing of consumer behavior in the sense of complying with the social distancing recommendations, at least until a vaccine or effective treatment is available. In the current context, marked by a high degree of uncertainty about the future evolution of the number of infections and how the current health crisis will be managed, the latest data indicate the entry of the global economy into the most significant recession since the Great Depression (1929-1933). The latest estimates of the International Monetary Fund, published in October this year, indicate a negative economic growth of -4.4% in 2020, an upward

revision compared to the previous forecast (June 2020), but well below the level reached during the global financial crisis.

The upward revision took into account a faster improvement in economic activities, especially in the advanced economies, following the gradual lifting of containment and quarantine measures, which was reflected in better than expected results with regard to the GDP of the 2nd quarter of 2020. For the year 2021, the IMF estimates indicate a recovery of the global economy, with an advance of 5.2%, a slightly declining revision compared to the previous forecast in June 2020, taking into account the persistence of the social distancing phenomenon, which is expected to continue in 2021. The IMF's baseline scenario assumes that social distancing will continue until 2021, but will then disappear as vaccine coverage expands and treatments improve. Following the contraction in 2020 and the recovery in 2021, the level of global GDP in 2021 is estimated to be 0.6% higher compared to 2019. Growth projections imply high unemployment rates this year and in 2021 both in the developed states, as well as in emerging market economies.

Advanced economies will decline by 5.8% this year, an increase of 2.3 pp compared to previous estimates (June 2020), but for 2021 a recovery of the economy of developed countries is envisaged (+3.9%). Estimates for emerging countries and developing economies show a contraction of 3.3% in 2020 and an economic recovery (+6%) the following year. Emerging countries and developing economies face a number of vulnerabilities in the context of massive capital outflows, currency pressures and more limited fiscal space, with potential negative consequences for the implementation of measures to support economic growth.

A comparison between the analyzed regions shows that the lowest values are recorded in the euro area, for which the IMF estimates a negative growth of around -8.3% in 2020, in the context in which the pre-crisis forecasts indicated a further slowdown, with moderate advances for the euro area. The impact of COVID-19 on the economies of some developed countries in the euro area is significant, with Spain (-12.8%), Italy (-10.6%) and France (-9.8%) being among the most affected countries in terms of view of the socio-economic impact, which led to more pessimistic estimates by the IMF regarding the economic growth of the euro area.

The US economy will also be severely affected by the crisis generated by COVID-19, with an estimate of growth of -4.3% in 2020 according to the IMF and -4.6% in the EC scenario (Autumn Forecast).

Table 2 Economic growth prognosis

Region/ country	2019	European Commission		IMF	
		2020f	2021f	2020f	2021f
Overall	2.8	-4.3	4.6	-4.4	5.2
Advanced economies	1.7	-	-	-5.8	3.9
Emerging and developing countries	3.7	-	-	-3.3	6.0
US	2.2	-4.6	3.7	-4.3	3.1
Eurozone	1.3	-7.8	4.2	-8.3	5.2
EU	1.5	-7.4	4.1	-	-
Germany	0.6	-5.6	3.5	-6.0	4.2
Spain	2.0	-12.4	5.4	-12.8	7.2
France	1.5	-9.4	5.8	-9.8	6.0
Italy	0.3	-9.9	4.1	-10.6	5.2

Region/ country	2019	European Commission		IMF	
		2020f	2021f	2020f	2021f
Bulgaria	3.4	-5.1	2.6	-4.0	4.1
Croatia	2.9	-9.6	5.7	-9.0	6.0
Hungary	4.6	-6.4	4.0	-6.1	3.9
Poland	4.5	-3.6	3.3	-3.6	4.6
Romania	**4.2**	**-5.2**	**3.3**	**-4.8**	**4.6**
UK	1.5	-10.3	3.3	-9.8	5.9

Source: EC 2020 Autumn Forecast, World Economic Outlook - October 2020, IMF

The European Commission's forecasts (EC, Autumn Forecast, November 2020) project a similar trajectory for the evolution of the global economy in 2020 as the IMF. Thus, the EC expects a decrease of -4.3%, this year, a revision down 0.4 pp from the previous estimate (EC Summer Forecast: -3.9%) followed by a return in 2021 (+ 4.6%), in the context in which a progressive relaxation of the lockdowns would create the premises for a stabilization of economic activities.

According to EC estimates, in 2020, the economies of all EU Member States will be affected by the effects of the COVID-19 pandemic and the strict measures implemented by states to flatten the epidemic curve, with contractions between -2.2% (Lithuania) and -12.4% (Spain) in 2020. Along with Spain, the most affected countries in the euro area remain Italy (-9.9%) and France (-9.4%). Thus, the EU economy will contract by 7.4%, a lower level than during the global financial crisis (2008-2009), while estimates for the euro area indicate an even more significant decrease of -7.8. %, this year. In the case of the United Kingdom, the European Commission estimates a significant decrease (-10.3%) in 2020. As a general trend, there is an increasing revision of the estimate for the real GDP for most of the analyzed countries (except Spain and the United Kingdom) compared with the 2020 summer forecast, which reflects the results above expectations recorded in the second quarter compared to those initially anticipated.

The forecasts for 2021 show a recovery of all the economies of the Member States of the European Union, with economic growth between 2.2% (Netherlands) and 5.8% (France). However, the EU economy (+ 4.1%) will not fully recover next year the losses recorded as a result of the COVID-19 crisis.

Measures implemented by central banks to mitigate the negative effects of the pandemic

All these adverse developments in the first part of 2020 have been partially offset both by the introduction by an increasing number of states of fiscal measures to support the economic sectors affected by the COVID-19 crisis, and by the efforts of central banks to ensure financial stability by reducing interest rates and ensuring market liquidity.

To counter the effects of the COVID-19 pandemic crisis, the European Central Bank (ECB) has continued to implement a package of proportionate and appropriate measures to help maintain favorable financing conditions, support economic activities and ensure price stability and supply of liquidity in the financial system:

- maintaining the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility unchanged, at a low level compared to market expectations, of 0.00%, 0.25% and -0, 50% respectively;

- continuing the acquisitions of assets under the PEPP program: the pandemic emergency purchase program (PEPP) package was increased by EUR 600 billion, to a total value of EUR 1,350 billion. The horizon of net purchases made under the PEPP has been extended at least until the end of June 2021;
- the continuation of net acquisitions under the asset purchase program (APP) at a monthly rate of EUR 20 billion, together with acquisitions under the additional temporary envelope of EUR 120 billion by the end of the year;
- loan programs: establishing more favorable conditions for quarterly targeted longer-term refinancing operations (TLTRO-III); performing new additional targeted longer-term refinancing operations (TLTRO) to cover the period up to the June 2020 TLTRO III operation; introduction of a new series of non-targeted pandemic emergency long-term refinancing operations (PELTRO);
- swap / repo lines: reactivation of euro swap lines with central banks of Denmark, Croatia, Bulgaria, Romania, Albania, Hungary, Serbia, the Republic of Northern Macedonia and San Marino.

Long-term refinancing operations (LTRO-III) supported the provision of credit during the current crisis, to cover the liquidity needs of companies and to support current activities as declining corporate revenues forced them to resort to additional lending in order to finance working capital and other requirements. LTRO operations were also efficient in terms of relaxing the terms and conditions for loans to households and firms, with banks providing more favorable conditions for customers loan operations.

The Pandemic Emergency Purchase Program (PEPP) had an initial value of EUR 750 billion in March 2020 and increased by EUR 600 billion in June 2020, with the aim of stabilizing financial markets and mitigating the inflation rate decrease effect. The development of the PEPP program avoided the tightening of financing conditions for households, companies and banks during the COVID-19 pandemic.

In September 2020, the US Federal Reserve (US Fed) decided to keep the federal funds rate in the range of 0-0.25%, emphasizing that the evolution of the US economy depends largely on the trajectory of the virus. The current public health crisis will significantly influence economic activity, employment and short-term inflation. Although economic activity and the unemployment rate have recovered to some extent in recent months, they remain below the levels of the beginning of the year. Low aggregate demand and very low oil prices keep inflation low. Financial conditions have improved in recent months, in part reflecting the measures implemented to support the economy and the flow of credit to households and the US business environment.

In the current context, in August 2020, the NBR also decided to reduce the monetary policy rate to 1.50% from 1.75%; to reduce the deposit facility rate to 1.00% from 1.25% and the lending facility rate (Lombard) to 2.00% from 2.25%; and to continue repo operations and the purchase of government securities in lei on the secondary market. This approach has allowed the smooth functioning of the money market and other segments of the financial market, in order to finance in good conditions the budget expenditures and the real economy, in conditions of relative exchange rate stability.

Evolution of the harmonized index of consumer prices

According to Eurostat, inflation has hovered around the 0.4% -0.9% average in the euro area during the first 10 months of 2020, while core inflation, which excludes energy prices and volatile unprocessed food prices, remained at a moderate level in the first part of the year (maximum 1.3% in January-February 2020 and in July 2020, minimum 0.4% in September-October 2020). The decline in core inflation from 1.3% to 0.4% took place amid declining prices for non-energy industrial goods and services. In August 2020, HICP inflation entered negative territory for the first time since 2016, amid declining energy prices as a result of the sharp correction in oil prices and the contraction in aggregate demand. In October 2020, the annual inflation rate stood at -0.3% in the euro area and 0.3% in the European Union, a level similar to that recorded in the previous month. In October 2019, the same period of the previous year, the annual inflation rate was at a level of 0.7% in the euro area and 1.1% in the EU, respectively. The highest inflation values in October 2020 were observed in Poland (3.8%), Hungary (3.0%) and the Czech Republic (2.9%), while Greece (-2.0%), Estonia (-1.7%) and Ireland (-1.5%) recorded the lowest rates, according to the methodology of the harmonized index of consumer prices.

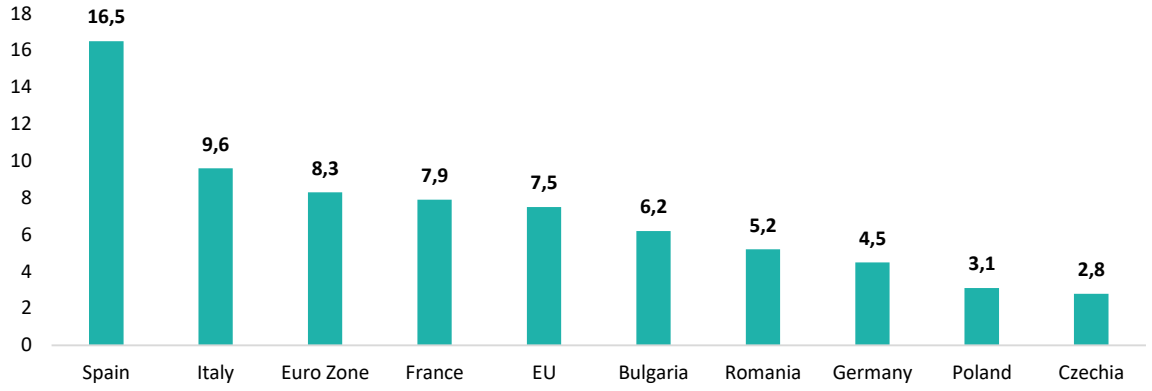
Regarding future developments, the European Commission expects the effects of the COVID-19 pandemic to put downward pressure on prices due to the deteriorating macroeconomic environment and the effects of VAT reductions and other measures implemented by Member States, but also in the context of a less optimistic perspective about the labor market that limits future wage increases. In this context, the EC revised its estimate for the Harmonized Index of Consumer Prices (HICP) to 0.3% for the euro area and 0.7% for the EU in 2020, both by only 0.1 pp up from the previous forecast (summer 2020 forecasts). For 2021, the annual inflation rate is projected to rise to 1.1% in the euro area and 1.3% in the EU through the effect of a potential stabilization of oil prices and a return of taxes to pre-crisis levels.

EU labor market developments and forecasts

The demand for labor remained consistent in the EU during 2019 and in the first 2 months of this year, before the outbreak of the crisis generated by COVID-19, as can be seen from the seasonally adjusted unemployment rate which stood in February 2020 at 6.5% in the EU, the lowest level since February 2000, and 7.3% in the euro area, the lowest level in the last 12 years. Since March, however, states have imposed strict measures to prevent the spread of COVID-19, with negative implications for the labor market, which has led to an increase in the unemployment rate between April and September 2020. In September 2020, the unemployment rate seasonally adjusted was 7.5% in the EU, up 1 pp from February, before the implementation of isolation and quarantine measures. In the euro area, the unemployment rate rose to 8.3% in September 2020.

Unemployment remains heterogeneous among European countries, with the highest level recorded in Greece (16.8%, data for July 2020), Spain (16.5%), Lithuania (9.8%) and Italy (9.6%) , while the opposite pole includes countries such as the Czech Republic (2.8%), Poland (3.1%), Malta (4.0%) and the Netherlands (4.4%). Europe is still facing problems with the qualification of the workforce required by new employment, as a result of business expansion and the low involvement of the young population. The youth unemployment rate stands at 17.1% in the EU and 17.6% in the euro area in September 2020, down from the previous month (17.8% in the EU and 18.3% in the euro area, respectively).

Figure 2 Unemployment rate (%) in European Union countries in September 2020



Source: Eurostat

The labor market will be significantly affected by the crisis generated by COVID-19 and the effects of the containment measures. According to the EC autumn forecast, the unemployment rate will be 8.3% in the euro area (from 7.5% in 2019) and 7.7% in the EU (6.7% in 2019) this year. For 2021, the EC estimates a further deterioration of the labor market situation, with the continuation of the upward trajectory of the unemployment rate, which will reach up to 9.4% in the euro area and 8.6% in the EU, respectively.

1.2. Local macroeconomic and financial developments

After in 2019 the Romanian economy registered a sustainable growth rate (+ 4.1% on the gross series, respectively +4.2% on the seasonally adjusted series), around the potential output, in the first 6 months of 2020, the local economic activities were seriously hit by the crisis generated by COVID-19. The Romanian economy suffered less in the first quarter of 2020, registering a growth rate of 2.4% (gross series), a positive evolution compared to most European economies, especially developed ones, which recorded severe contractions during this period. However, in the second quarter of 2020 the impact of the crisis generated by the COVID-19 pandemic was felt more strongly, given that the lockdown imposed by the Romanian state, was mainly placed during April - May 2020. Subsequently, starting with the second half of May, the state of emergency was replaced by the state of alert, which meant a gradual lifting of measures and restrictions, thus creating the premises for a recovery of the Romanian economy. However, there is a high degree of uncertainty about the economic improvement given the recent evolution of the new cases of COVID-19 infections.

Evolutions of local economic growth

In this context, the economic activity registered a major contraction in the second quarter of 2020, of -10.3% both on gross series and on seasonally adjusted series compared to the similar period of the previous year and compared to the first quarter of 2020, when the local economy, although it had experienced a significant slowdown in growth, continued to grow related to the same period last year.

On the usage side, the gross fixed capital formation had a positive contribution to the GDP dynamics (+0.5 pp), with an increase of the volume by 2.2% compared to the similar period of the previous year, given the expansion of the construction activities. However, there is a slowdown in the

contribution of gross fixed capital formation to GDP growth compared to the second quarter of 2019, respectively compared to the previous quarter. On the other hand, private consumption had the largest negative impact on growth (-8.4 pp), with a decrease in volume by 13.3% compared to the second quarter of 2019, amid a general trend of maintaining demand for consumption only for products of strict necessity. Net exports continued to negatively influence growth (-2.1 pp) amid a sharper decline in the volume of exports of goods and services (-28.5%) due to reduced external demand, compared to the decline recorded by the volume of imports of goods and services (-22%).

Table 3 GDP dynamics by main components (gross series)

Indicator	Q1_2019	Q2_2019	Q3_2019	Q4_2019	Q1_2020	Q2_2020
Gross domestic product	**5.2**	**3.5**	**3.4**	**4.7**	**2.4**	**-10.3**
Resources						
Agriculture	3.7	-1.8	-5.0	4.8	0.4	-11.4
Industry	1.7	1.1	-2.2	-2.9	-5.9	-20.3
Construction	7.3	6.8	21.7	19.5	23.3	9.3
Wholesale and retail trade	5.1	3.0	2.3	4.0	5.0	-12.9
Information and communications	12.3	9.1	7.4	8.7	14.2	10.8
Financial intermediation and insurance	-3.3	-4.2	-3.6	-4.1	-1.3	-2.1
Real estate transactions	2.6	5.8	4.9	7.5	2.7	-2.7
Professional, scientific and technical activities	13.8	6.6	13.6	9.0	10.5	-6.7
Uses						
Private consumption	6.9	4.7	4.1	6.4	3.8	-13.3
Gross fixed capital formation	3.1	20.1	25.2	15.3	13.1	2.2
Exports	3.8	2.5	3.5	6.0	-1.3	-28.5
Imports	8.8	4.2	7.2	5.8	2.9	-22.0

Source: NIS, gross series, annual dynamics

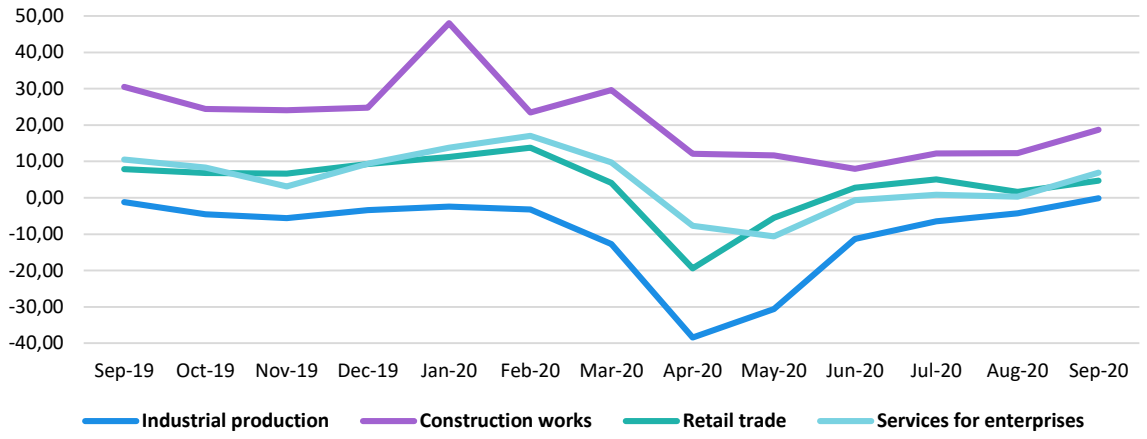
On the supply side, there was an increase in construction activity in the second quarter of 2020, by 9.3% compared to the second quarter of 2019 (with a contribution to GDP growth of 0.3 pp) and information and communications with a rise in volume of 10.8% compared to the previous year, contributing by 0.6 pp to the GDP growth, simultaneously with the decrease of the industrial activity (-20.3%; a minus to the GDP growth by 4.5 pp compared to the second quarter of 2019) and of agriculture (-11.4%, a negative contribution of -0.3 pp).

Although the first half of 2020 was marked by the crisis caused by the COVID-19 pandemic, investments remained in the positive territory during this period. Net investments reported by economic agents and public institutions registered an advance in the first half of 2020 (+1.5%) compared to the similar period of the previous year, according to data published by NIS. The evolution was sustained by a more accentuated annual growth of new construction works (+7%) and by a lower tendency in the volume of acquisitions of equipment, including means of transport (+2.3%). In terms of structure, net investments were focused on the construction sector in a percentage of 31.3%, followed by trade and services (29.1%) and industry (24.1%), the latter falling to the third place, occupied in first semester 2019 by trade and services.

The evolution of the monthly indicators published by NIS highlights short-term decreases in economic activities between April and May 2020 in the context of the high degree of uncertainty

regarding the evolution of the local economy amid measures implemented to prevent the spread of COVID-19, followed by recovery starting with June - July 2020, as the restrictions gradually lifted.

Figure 3 Evolution of the main sectoral indicators (annual variation, %)



Source: NIS

Significant increases were registered in the construction sector, which registered an advance of 17.6% in the first 9 months of 2020, compared to the similar period of the previous year. Construction works also advanced significantly in September 2020 compared to the same period of the previous year, by 18.7%. The volume of new constructions increased by 11.7%, the capital repairs activity registered an advance of 83.4%, and the maintenance and current repairs activity increased by 16.7% in September 2020 compared to the similar period of the previous year. By construction objects, the increase was supported by all 3 subcomponents: the extension of works to non-residential buildings (+ 35.1%), residential buildings (+ 24.6%) and engineering works, with an advance of 8.5%.

The dynamics of industrial production remained in negative territory in the first 9 months of 2020 compared to the same period of the previous year, registering a decrease of 12.1%, amid reduced external demand. In September 2020, industrial production decreased by 0.1% compared to September 2019, a trend imprinted by the mining and quarrying activity (-8.9%), given that the manufacturing industry (+0.4%) and the production and supply of electricity, gas, steam and air conditioning (+0.7%) returned to positive territory. The most affected branches of the manufacturing industry were the repair, maintenance and installation of machinery and equipment (-28.6%), clothing manufacturing (-28.1%), footwear and leather products (-24.3%) in September 2020 compared to the same period of the previous year. On the other hand, there were consistent leaps in dynamics in the industry of manufacturing of basic pharmaceutical products and pharmaceutical preparations (+24.5%), substances and chemicals (+13.6%), electrical equipment (+9,1%), road transport vehicles, trailers and semi - trailers (+9.0%) and textiles (+6.5%).

The business services sector registered an advance of 2.9% in the first 9 months of 2020 compared to January-September 2019, thus remaining in positive territory, a trend supported mainly by the high dynamics observed in the first 3 months of the current year. In September 2020, business services registered an increase of 6.6% compared to the same period of the previous year, observing the significant advance of the turnover in the activities of information services and information technology (+ 26.9%).

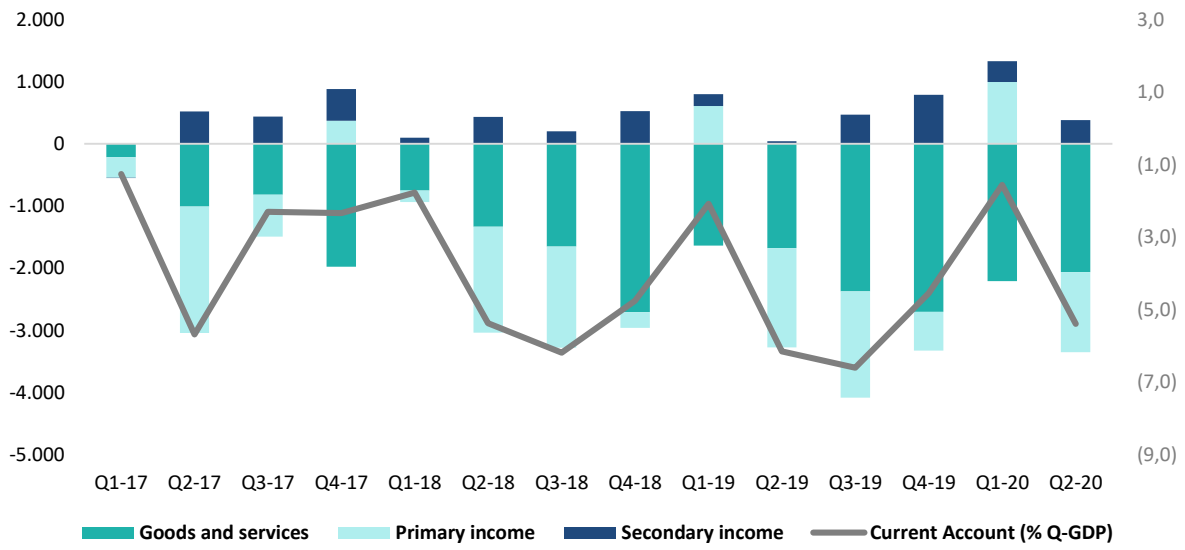
A positive evolution of the turnover was also registered by the retail trade (+ 1.7%) in the first 9 months of the year 2020 compared to the period January - September 2019, especially through the sales of food (+5.8%) and non-food (+3.9%) products, while the retail trade of motor fuels decreased by 8.4%. Data published by the NIS for September 2020 indicate a 4.6% increase in turnover in the case of retail trade compared to September 2019, an increase supported by the positive dynamics of sales of non-food (+11.6%) and food (+2.8%) products.

Deficits and indebtedness

A potential medium term risk may come out in the conditions of the accelerated expansion of the current account deficit, although the estimates of the National Strategy and Forecast Commission (NCSP) indicate for 2020 a slight adjustment of the current account deficit, in the context of trade being globally affected by the effects of the crisis caused by the COVID-19 pandemic. The current account deficit stood at 5.4% of GDP in the second quarter of 2020, under the influence of income balance deterioration.

In the first 9 months of 2020, FOB exports decreased by 13.6%, and CIF imports diminished by 9.5% compared to the same period of the previous year. The slower decline in imports compared to exports led to a deficit of the FOB-CIF trade balance of about EUR 13 billion, up by about 8.3% compared to January-September 2019. Non-EU trade generated a deficit of the FOB-CIF trade balance of EUR 3.6 billion (27.6% in the total trade deficit), 6% above the level recorded in the first 9 months of the year 2019. Relations with EU partners continued to be dominated by the transport machinery and equipment segment, with a share of 37.5% in total FOB exports and 28.1% in total CIF imports.

Figure 4 Evolution of the current account by components (million euros)



Source: NBR, FSA calculations

In the first 9 months of 2020, Romania registered a budget deficit of 6.36% of GDP (Lei 67.3 billion), over half of its raise being induced by measures implemented to mitigate the negative effects of the current crisis. Thus, the increase of the budget deficit took place, mainly due to the public investment expenditures (Lei 6.83 billion) and the exceptional pandemic payments (Lei 10.35 billion), simultaneously with the budget revenues decrease during March-September as a result of

the pandemic situation and of the postponement of payments of certain tax obligations (Lei 16.15 billion). In terms of revenues, an increase in the budget deficit was also influenced by the increase in VAT refunds (Lei 3.22 billion) to ensure the liquidity of companies and the granting of bonuses in case of due payment of the profit and income tax of micro-enterprises (Lei 0.57 billion) at maturity.

Public debt increased from 33.8% of GDP in the first quarter of 2019 to 41.1% in June 2020, in line with the trends observed during this period in all Member States, given the large needs of government for funding in the context of managing the COVID-19 crisis. In Europe, the lowest public debt to GDP ratios were observed in Estonia (18.5%), Bulgaria (21.3%), Luxembourg (23.8%) and Sweden (37.1%), and high debts, above GDP, were recorded in Greece (187.4%), Italy (149.4%), Portugal (126.1%), Belgium (115.3%), France (114.1%), Cyprus (113.2%) and Spain (110.1%), analyzing the data for the second quarter of 2020 published by Eurostat. In August 2020, the debt of the Romanian public administration exceeded the value of Lei 450 billion, representing a share of 42.8% in GDP.

The share in GDP of the gross external debt (51.3% - June 2020) has followed an upward trend in the last 12 months (49.4% -June 2019). Unlike Romania, the developed countries of the euro area fall on average within a percentage of the external debt of over 120% of GDP.

Table 4 Deficit and indebtedness (% of GDP)

Indicator	Q1_19	Q2_19	Q3_19	Q4_19	Q1_20	Q2_20
Current account balance *						
RO	-2.1	-6.2	-6.6	-4.5	-1.5	-5.4
Eurozone	2.2	0.6	3.5	2.9	1.1	1.1
ESA government deficit						
RO	-5.7	-3.2	-4.4	-4.4	-9.5	-11.4
Eurozone	-2.1	-0.1	-0.7	0.3	-4.1	-11.4
Government debt						
RO	33.8	33.9	35.2	35.3	37.5	41.1
Eurozone	86.3	86.2	85.8	84	86.3	95.1
Gross external debt **						
RO	48.2	49.4	49.6	49.2	48.6	51.3
Eurozone	127.2	127.7	129.8	123.6	130.5	131.9

Source: Eurostat, NIS, ECB, NBR, FSA calculations; * share in quarterly GDP (calculated as the average of the last 4 quarters); ** relative to GDP calculated as the sum of the last 4 quarters

Developments on the Romanian labor market

The Romanian labor market was impacted by the COVID-19 pandemic and the containment measures, which reflected in a moderate decrease in the employment rate and the increase in the unemployment rate. The employment rate of the population aged between 20 and 64 decreased slightly to 70.4% in the second quarter of 2020, after in 2019 it stood at 70.9%. However, the employment rate remained above the 70% target set for Romania in the Europe 2020 Strategy in the second quarter of 2020, according to data published by the NIS. The unemployment rate stood in the first 9 months of 2020 at an average value of 4.9%, 1 pp more than the average of the previous year. In September 2020, the unemployment rate stood at 5.2%, higher than the values recorded in the previous year, but slightly lower than in June - August 2020.

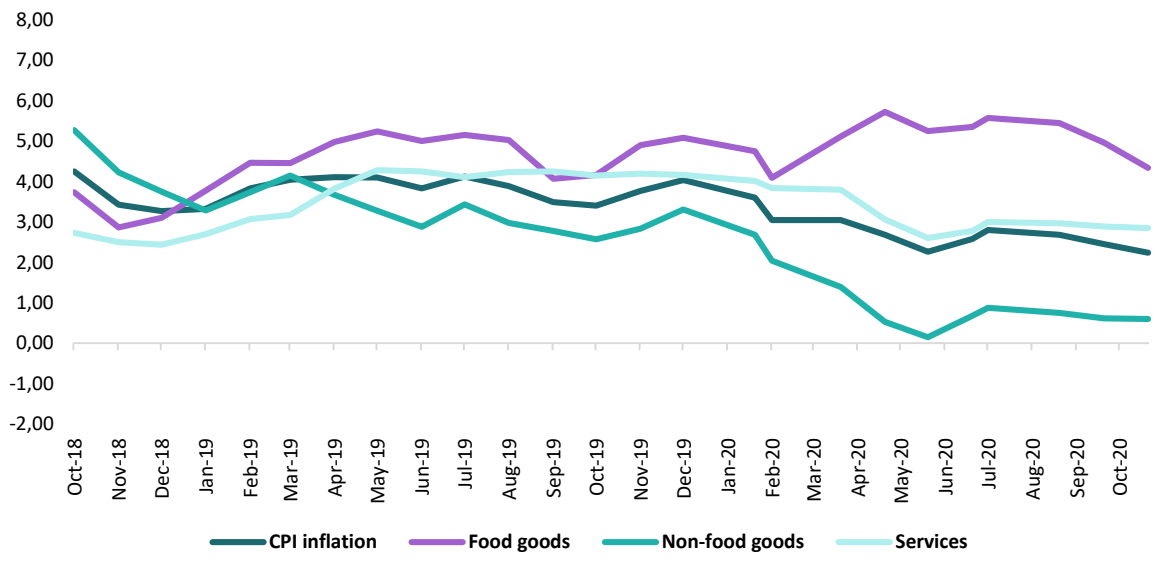
A positive evolution, despite the challenges and negative effects of the COVID-19 pandemic, was seen in the average net salary, which was on an upward trend in the first 3 months of the year, with a slight decrease in April - May, during the state of emergency, and subsequently, in recovery from June, exceeding the pre-crisis level. In September 2020, the average net nominal earnings increased by 7.8% compared to September 2019, and compared to the previous month, the average net earnings registered an advance of 1.4%. The average net earnings continue to register a wide salary distribution, the ratio being 4 times between the maximum / minimum level per branches of activity.

Evolution of the annual inflation rate

The fall in energy prices as a result of the adverse evolution of oil prices, but also the reduced fuel excise and low aggregate demand made the annual inflation rate to evolve on a downward slope in the first 10 months of 2020, starting from 3.60% in January and up to 2.24% in October, the maximum being reached in January 2020. However, there was a high demand for some foodstuffs (flour, corn, bread, oil, meat and canned meat, some fruits and vegetables), consumption being mainly oriented towards goods of strict necessity. Supply-side shocks from the reduced supply of citrus fruits and the significant decline in cereal production this year also contributed to rising prices for these food categories.

The annual HICP inflation rate stood at 1.8% in October 2020, the lowest level reached this year, similar to that recorded in May. However, it remains one of the highest rates in the European Union, after Poland (3.8%), Hungary (3.0%) and the Czech Republic (2.9%), but is decreasing compared to 2019, when it recorded an average value of 3.9%.

Figure 5 Evolution of the annual inflation rate



Source: NIS, FSA calculations

Regarding future developments, the NBR estimates (Inflation Report, August 2020 edition) a probable level of inflation of 2.7% at the end of 2020 (-0.1 percentage points compared to the previous forecast), a level in the range of variation of the stationary target, after which it will continue to decrease towards 2.5% at the end of 2021.

The EUR / RON exchange rate fluctuated during 2020 around an average trend of 4.83 Lei/Euro, the foreign exchange behavior in the first 3 quarters of the year being the significant depreciation of the

Leu against the European currency due to the high degree of uncertainty and volatility raised from the financial markets due to concerns about the coronavirus pandemic. Thus, the EUR/RON exchange rate registered the highest quotations in history: an average monthly value of 4.87 lei/Euro, in October 2020.

Forecasts of economic growth and key macroeconomic indicators

The forecasts of the International Monetary Fund published in October 2020 in the World Economic Outlook Report indicate a drop of 4.8% of Romania's GDP in 2020, followed by a return of economic growth to 4.6% in 2021. The short-term outlook is less optimistic about other indicators as well. According to the IMF, the unemployment rate could reach a level of 7.9%, and the trend of deepening the current account deficit would continue, amid higher import dynamics relative to exports, to an estimated level of 5.3% of GDP in 2020 and a return to 4.5% in 2021.

Table 5 Projections of the main macroeconomic indicators

Indicator	2019	IMF		EC		NCSP	
		2020	2021	2020	2021	2020	2021
GDP	4.2	-4.8	4.6	-5.2	3.3	-4.2	4.5
Inflation	3.9	2.9	2.5	2.5	2.5	2.7	2.3
Unemployment	3.9	7.9	6.0	5.9	6.2	5.1	4.5
Current account (% GDP)	-4.7	-5.3	-4.5	-4.6	-4.8	-4.6	-4.5
Gross government debt (% of GDP)	35.3	44.8	49.6	46.7	54.6	-	-
Government deficit (% of GDP)	-4.4	-9.6	-8.1	-10.3	-11.3	-	-

Source: IMF - World Economic Outlook, EC - Autumn 2020 Economic Forecasts, NCSP - preliminary autumn 2020 forecast

The latest estimates of the European Commission (Autumn Forecast, November 2020) show a decrease of 5.2% of the Romanian economy, followed by a return of economic growth starting next year (+ 3.3%) and continuing in 2022 (+ 3.8%). Private consumption, the main driver of growth in previous years, is expected to fall by 8.8% this year, due to lower disposable household income, restrictive measures imposed to prevent the spread of COVID-19 and against a potential longer-term change in consumer behavior: increasing savings, a trend observed at EU level. In the context of a relaxation of containment measures, the EC estimates a gradual return to private consumption: + 4.9% in 2021 and + 5.8% in 2022. According to the EC's autumn forecast, investment is expected to remain in positive territory, including in 2020, with an advance of gross fixed capital formation of 2.5%, as a result of the positive developments registered by the construction sector, including in the most affected months from the perspective of the imposed isolation measures. Following the sharp contraction in exports in May, the EC expects their return and the resumption of import growth in 2021, supported by both the recovery in global trade and rising consumer spending. However, the contribution of net exports to economic growth over the forecasted horizon is expected to remain negative. According to the EC, the current account deficit is estimated to decrease slightly in 2020 compared to 2019 (-4.6% compared to -4.7%), resuming starting with 2021 the growth trend (-4.8%).

The budget deficit will increase significantly in 2020 to 10.3% of GDP, mainly due to the negative effects of the pandemic, which will lead to an increase in public spending to mitigate the negative impact on the economy, simultaneously with a decrease in budget revenues due to of the contraction of economic activities.

The sharp fall in energy prices, as well as reduced aggregate demand, will reduce inflationary pressures in 2020, offsetting the expected rise in food prices as a result of supply chain disruptions and drought. The annual HICP inflation rate decreased from 4% in December 2019 to about 1.8% in October 2020 (the minimum level in the first 10 months of the year) and is estimated to reach an average of 2.5% throughout the year. For 2021, the European Commission estimates a stabilization of HICP inflation at 2.5%. The unemployment rate is estimated at 5.9% in 2020 and will continue to rise in 2021 (+6.2%). In 2022, unemployment is expected to fall again, but will remain above pre-crisis levels.

On the other hand, the National Commission for Strategy and Prognosis estimated that the impact of COVID-19 on the Romanian economy (preliminary autumn forecast) will be reflected in a contraction of -4.2% of GDP in 2020, a revision decreasing by 0.4 pp compared to the summer forecast (-3.8%), as a result of the negative evolutions estimated for a series of macroeconomic indicators. Thus, according to NCSP, the activity in the industry will continue to decrease in 2020 (-9.1% compared to 2019), a trend manifested in the previous year, but with a deepening of negative dynamics due to the impact of COVID-19 (in decrease by 0.5 pp compared to the summer forecast). For the construction sector, an increase in activity is estimated by 9.5% compared to 2019 (as against +5.8% in the previous scenario), while in the case of services the estimated reduction is 2.0%. On the demand side, gross fixed capital formation will increase by 2.8% compared to the previous year, mainly due to the results obtained in the construction sector, in which positive dynamics were registered during the first 9 months of the year 2020. NCSP estimates a decrease of 3.7% of private consumption and an increase of 4.3% of government consumption expenditures as a result of measures implemented by the Government to reduce the socio-economic impact of the COVID-19 pandemic. Regarding the current account deficit, NCSP estimates an adjustment of up to 4.6% of GDP in 2020 (4.4% of GDP in the previous forecast), due to the increase in the trade deficit from -18.3 billion euros in the previous estimate (summer forecast) at -18.7 billion euros.

1.3. Measures taken at European level on the stability of non - banking financial markets

Macroprudential stability measures

Given the consequences of the coronavirus pandemic on the EU economy and on the financial system, the ESRB, as the European authority responsible for the macro-prudential oversight of the EU financial system, has decided to focus on 5 priority areas in the EU financial system, where the current crisis could create negative effects from a macroprudential perspective. These actions are guided by two principles: the first aims at obtaining a response at sector and country level as well as the establishment of national macroprudential actions that do not cause negative effects and do not affect the EU Single Market; the second aims to enable financial institutions to continue to provide financial services to the real economy and to ensure that adequate liquidity resources and capital are available for the financial system.

- Implications for the financial system of guarantee schemes and other fiscal measures to protect the real economy

The outbreak of the coronavirus pandemic and the containment measures that have been implemented have been a major shock to European economies, with Member States resorting to a

number of fiscal measures such as a debt moratorium and public guarantee schemes to protect non-financial corporations and households. Although these measures have been targeted at the non-financial sector, they have implications for financial stability. In this context, the ESRB issued a Recommendation calling on national macro-prudential authorities to monitor the implications on the financial stability of these measures and to report relevant information. The characteristics to be analyzed refer to the volume, type of financial support, beneficiaries and eligibility conditions, duration and information on the degree of use of the measure. In order to establish the implications on financial stability, it is recommended to evaluate the following indicators: credit flow to the real economy, liquidity, solvency and indebtedness of the non-financial sector, as well as the financial robustness of financial institutions.

- Market illiquidity and implications for asset managers and insurance companies

The sharp decline in asset prices due to the coronavirus pandemic was accompanied by significant redemptions from certain investment funds and a major deterioration in the liquidity of financial markets. Although market conditions have subsequently stabilized as a result of the measures taken by central banks, supervisors and EU governments, uncertainties remain about the macro-financial outlook. The ESRB has identified two segments of investment funds where enhanced attention is needed in terms of financial stability: investment funds with significant exposures to corporate bonds and investment funds with significant exposures to the real estate sector. Thus, the ESRB recommends that the ESMA (European Securities and Markets Authority), together with the national competent authorities, conduct a closer monitoring of these two types of funds and assess the readiness of these two segments to potential adverse shocks, including a potential redemption.

- The impact of corporate bonds rating downgrades on markets and entities in the financial sector

The corporate bond sector has been hit by the deteriorating picture of the EU economy as a result of the COVID-19 pandemic. For this reason, ESRB assesses the impact of a scenario concerning a significant number of downgrades in the financial system.

- Restrains from the payment of dividends, shares buy-backs and other payouts

Many institutions, such as EIOPA, EBA and the ECB, together with several national authorities, have encouraged banks and insurance and reinsurance companies in the European Union not to make voluntary payouts (dividends, bonuses and share buybacks to remunerate shareholders). These measures can improve the resilience of the financial sector, strengthen the lending capacity of the real economy and reduce the risk of failure of financial institutions as a result of COVID-19 risks. ESRB supports these initiatives and, in addition, has issued a similar recommendation to ensure that financial institutions in the financial sector that may affect financial stability maintain high levels of capital.

- Liquidity risks resulting from margin calls

The coronavirus pandemic and recent turmoil in oil markets have led to a sharp decline in asset prices and to an increase in volatility that have resulted in significant margin calls in the centrally or non-centrally cleared OTC derivatives markets, with implications for central counterparty liquidity. ESRB issued a recommendation on liquidity risks arising from margin calls, structured in four measures: limiting the cliff effects on the demand for collateral; performing stress scenarios to assess future liquidity needs; limiting liquidity constraints on margin collection; and reducing pro-cyclicality in the process of providing clearing services and financing transactions through financial

instruments. The first and fourth measures aim to limit the significant changes and disproportionate effects of the initial margins and guarantees. Liquidity planning must be predictable and manageable by limiting unexpected and major margin calls. The second recommendation aims to include in the liquidity stress tests of the central counterparties any event that could lead to a lack of liquidity. According to the third recommendation, central counterparties limit asymmetries in the payment of variation margins collected intraday and project margins that are predictable and avoid excessive liquidity constraints for clearing members.

Economic recovery plan for Europe

At the EU Council meeting in July 2020, EU leaders agreed on a EUR 750 billion recovery effort (NextGenerationUE) to support the EU in tackling the crisis caused by the COVID-19 pandemic and on a long-term EU budget for the period 2021-2027 amounting to EUR 1,074 billion . **The principles underlying the EU's economic recovery plan are: environmental sustainability, productivity, fairness and macroeconomic stability. Funding will be aimed at facilitating the green and digital transition, strengthening potential growth, creating new jobs and the economic and social resilience of Member States.**

The NextGenerationEU tool will be implemented through **three pillars**:

- **Supporting Member States' recovery**: Recovery and Resilience Facility; recovery assistance for cohesion and European territories (REACT-EU); reinforced rural development programs; reinforced Just Transition Mechanism.
- **Economic recovery and support for private investment**: the solvency support instrument; the strategic investment facility; strengthened InvestEU program.
- **Learning the lessons from the crisis: the new health program; reinforced rescEU; strengthening research, innovation and external action programs**.

In order to finance the necessary investments, the European Commission will issue bonds on the financial markets on behalf of the EU, making the efficient functioning of EU capital markets crucial. In this context, the economic recovery from the COVID-19 pandemic and the strengthening of the EU's potential can be explored by creating a deeply integrated and developed Capital Markets Union. This project will help mobilize the resources needed to stimulate the economy after the global contraction and increase resilience to new challenges, such as Brexit and global trade tensions. In addition, it will provide opportunities to accelerate the transition to a low-carbon and digital economy.

Starting from these developments, in September 2020, the European Commission published a new Action Plan to boost the development of the Capital Markets Union (CMU) in the coming years and to support the economic post-pandemic recovery of the European Union. An integrated capital markets will facilitate the relaunch of the European Union, ensuring that the business environment has access to sources of financing and the European people have the confidence to invest for their future. The Capital Markets Union is also vital to supporting the international role of the euro.

In essence, the CMU Action Plan aims to achieve three main objectives:

- ensuring an economic recovery that is green, digital, inclusive and resilient by making financing more accessible for e European companies;
- transforming the European Union into a safer place for the individuals to save and invest in the long run; and

- integration of national capital markets into a single capital market at EU level.

To reach these goals, the European Commission put forward a set of 16 action measures, the most relevant being: the creation of a single access point to companies data for investors; support for insurance companies and banks to invest more in European business; strengthening investment protection to support more cross-border investment within the EU; facilitating the monitoring of the pension system adequacy across Europe; harmonization of insolvency rules; developing supervisory convergence and consistent application of legislation to EU financial markets.

Accelerating the digital transformation in the context of the current crisis has led the European Commission to propose a new Digital Financial Services Package, consisting of the Digital Finance and Retail Payments Strategies, and the legislative proposals on crypto assets and digital resilience. The proposed package will boost competitiveness and innovation at EU level and provide consumers with more opportunities related to modern financial services and payments.

- The strategy on digital financial services aims to develop financial services that are digital-friendly and to stimulate innovation and competitiveness among financial service providers. It will also reduce fragmentation in the digital single market, so that consumers can access products across borders and Fintech companies can grow. Data management is another element of the Strategy, aiming at data sharing and open finance, while maintaining data protection and confidentiality.
- The retail payment strategy will facilitate electronic commercial transactions and build an integrated retail payment system.
- Legislative proposals on crypto assets will provide legal clarity and certainty for issuers and providers of crypto assets. The new rules will allow for the passporting services, establish capital requirements and a procedure for investor complaints. Legislative proposals on digital operational resilience aim to ensure that all participants in the financial system are protected from cyber-attacks and other risks.

Impact of public authorities' measures to support the economy on non-bank financial markets in Romania

The most important fiscal measures adopted by the government to support the population and the business environment, in the context of the COVID-19 pandemic, were the following[1]:

- Support program for small and medium enterprises - IMM INVEST ROMANIA;
- Extension of the payment term for the tax on building, the tax on land, respectively the tax on means of transport, from March 31, 2020 to June 30, 2020;
- Interest and delay penalties are not calculated and are not due for the fiscal obligations due during the state of emergency and for another 30 days from its termination;
- Technical unemployment benefit for the period of suspension of the employment contract; allowance for authorized natural persons or other professionals who do not have the quality of employers and interrupt their activity;
- Allowance for parents staying at home with their children during the state of emergency;
- Bonus for companies that pay tax on profit or tax on micro-enterprises income;

[1] National Investment and Economic Recovery Plan, https://gov.ro/fisiere/programe_fisiere/Planul_Na%C8%9Bional_de_Investi%C8%9Bii_%C8%99i_Relansare_Economic%C4%83.pdf

- Postponement of VAT customs duty on imports of medicines, safety equipment, other medical devices and equipment and sanitary materials that may be used in the prevention, limitation, treatment and control of COVID-19;
- Extending the VAT refund with subsequent control, in order to make available to taxpayers the money that the state owed, so as to support their business during this period;
- Bonuses for corporate taxpayers who have paid the tax due for the first quarter of 2020 until the due date of April 25, 2020 inclusive. The bonus was 5% for large taxpayers and 10% for medium taxpayers and other taxpayers;
- Taxpayers obliged to pay the activity-specific tax, according to Law no. 170/2016 on the activity-specific tax for 2020, did not owe specific tax for the period in which they interrupted the activity totally or partially;
- If the single declaration on income tax and social contributions due by individuals was submitted by June 30, 2020 inclusive, the following bonuses are granted: a) for the payment of income tax, social insurance contribution and social health insurance contribution, representing annual fiscal obligations for 2019, a bonus of 5% of these amounts is granted, if all these fiscal payment obligations have been extinguished by payment or compensation, in full until June 30, 2020 inclusive; b) for the submission of the single declaration regarding the tax on income and the social contributions due by the natural persons by electronic means of remote transmission, a bonus of 5% of the tax on income, the social insurance contribution and the social health insurance contribution is granted.
- Flexibility of the conditions for accessing the restructuring of budgetary obligations, by adopting provisions to regulate: extending the deadline for submitting notifications on the intention to benefit from the restructuring of budgetary obligations until September 30, 2020, and the restructuring request can be submitted by December 15, 2020.

On July 1, 2020, the Romanian government announced the continuation of the previously adopted measures for 3 months, as well as a package of new incentives. The National Investment and Economic Recovery Plan was drawn up, with the aim of overcoming the COVID-19 crisis and ensuring convergence with European economies. The national investment and economic recovery plan contains measures to support the economy in the form of: (i) grants, guarantee schemes and support programs - support grants for companies; guarantee schemes and instruments for providing liquidity in the economy, financial-banking instruments for increasing capitalization and financing investments; and active employment and social protection measures; and (ii) National investment plan: transport infrastructure; investments in energy infrastructure, economy and business environment; health infrastructure; education infrastructure; investments in local development; agricultural and irrigation infrastructure; environmental investments; and sports infrastructure.

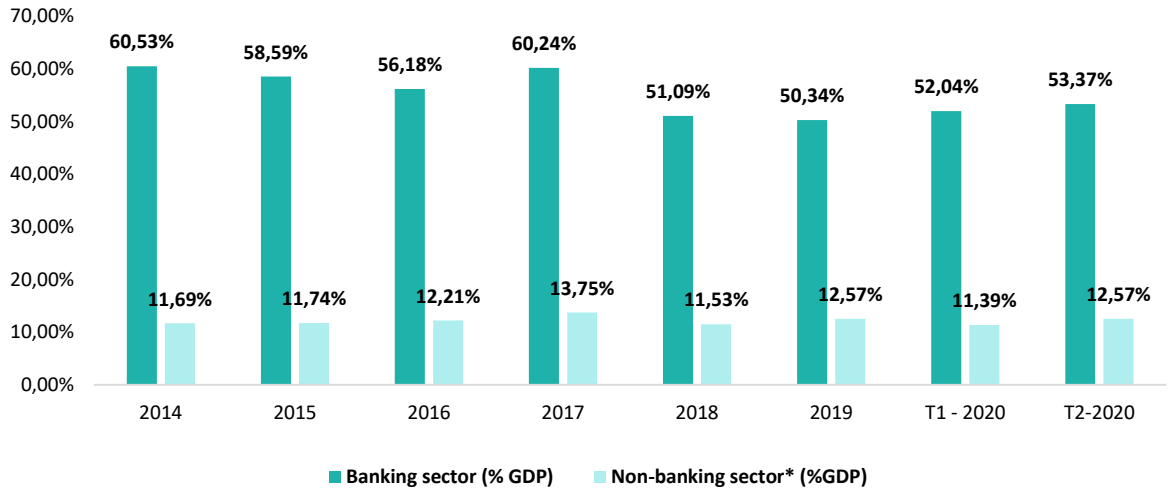
At the same time, access to EU funding through the economic recovery package and the multi-annual budget agreed at EU level is conditional on each Member State drawing up a national recovery and resilience plan setting out the reform and investment agenda by 2026.

The measures adopted by the Romanian government have supported the business environment and households in front of the shock caused by the current crisis, without transmitting negative side effects on the non-bank financial system. Actions aimed at relaunching the economy can stimulate the development of the non-bank financial sector in Romania.

1.5. The size of the non-bank financial markets in Romania

The size of non-bank financial sector assets related to GDP showed a moderate upward trend in the second quarter compared to the previous quarter, when the financial sector was marked by the outbreak of the COVID-19 pandemic.

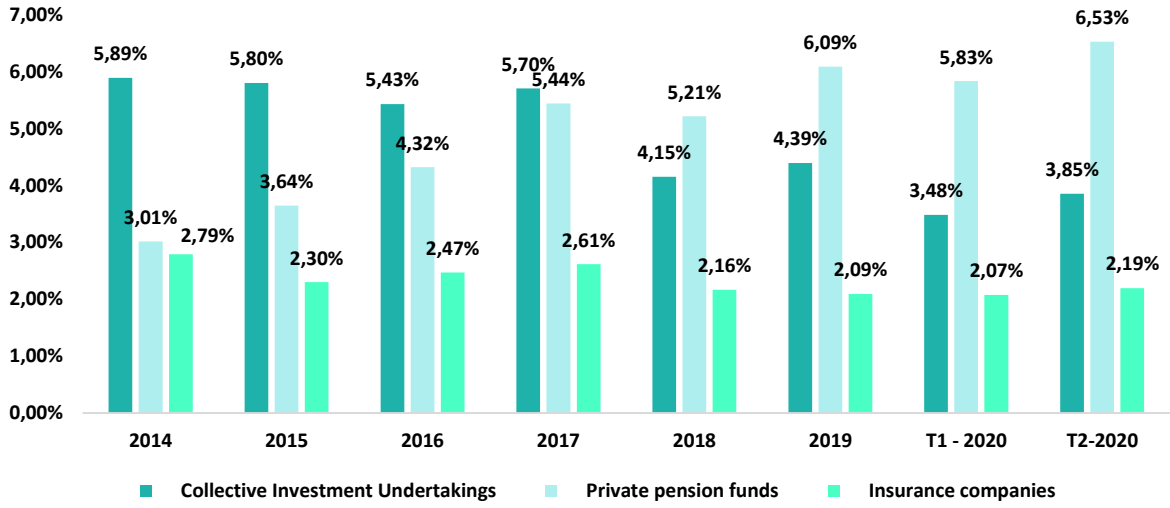
Figure 6 Financial sector assets relative to GDP



Source: NIS, NBR, FSA calculations, * IFNs are not included

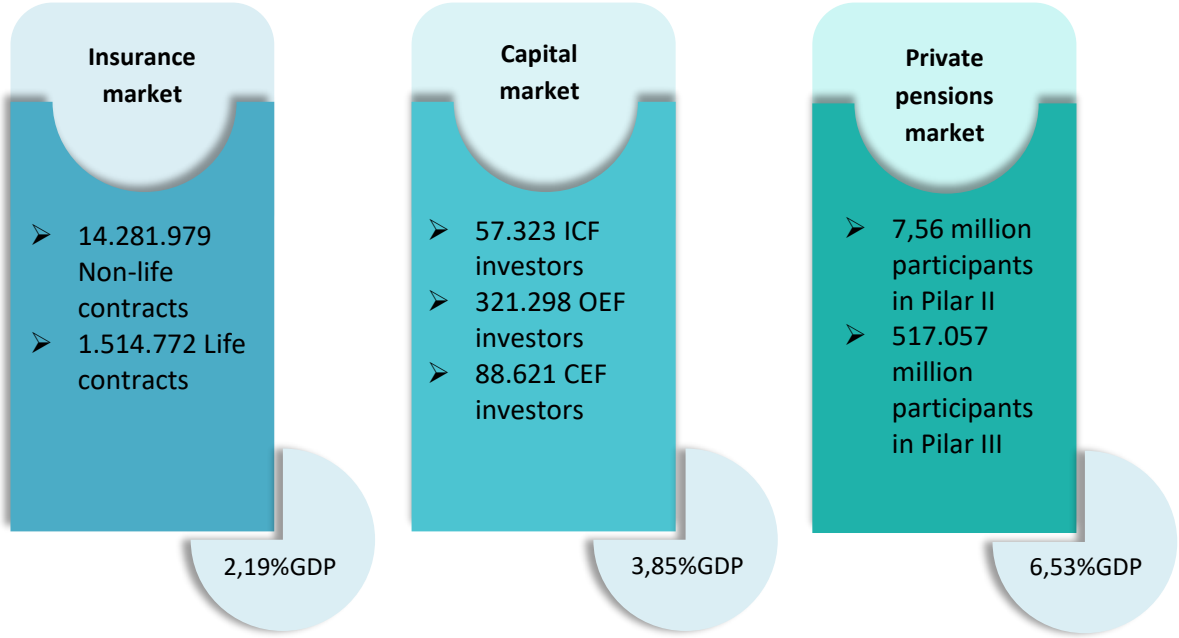
The evolution of private pension total assets was determined both by the flow of contributions received monthly and by the positive results of managers through their investment policies, the value of assets relative to GDP being 6.53% at the end of June 2020, a slight increase compared to 6.09% in 2019. The second place is attributed to the capital market sector, where the COVID-19 pandemic influenced the drop of investment fund assets, causing a ratio of 3 .85% of assets per GDP. The indicator is slightly decreasing as compared to 2019 (when it was 4.39%). The assets of the insurance - reinsurance sector held on June 30, 2020 a percentage of 2.19% of GDP, increasing as compared to 2019 (2.09%).

Figure 7 Non-bank financial sector assets relative to GDP



Source: NIS, FSA calculations

Figure 8 Consumers of non-bank financial markets



Source: FSA

At the end of September 2020, the market capitalization on the regulated market (shares only) reached the level of Lei 134.60 billion . In March 2020, the BVB stock market capitalization (shares only) decreased significantly, amid investor fears about the COVID-19 pandemic. The lowest level of stock market capitalization, Lei 113.85 billion, was registered on March 18, 2020.

Figure 9 Indicators regarding the financial instruments and investments sector

Stock market – 30.09.2020	
The total value traded on the Bucharest Stock Exchange (BSE) on September 30, 2020	**Lei 12,69 billion**
The predominant class of financial instruments	**Shares – 78%**
Market capitalization on September 30, 2020	**Lei 134,60 billion**

Investment funds market – 30.06.2020	
Total undertakings for collective investment in transferable securities' assets	**Lei 40,46 billion**
18 Investment Management Companies (IMC) 83 Open-End Investment Funds (OEIF) 26 Closed-End Investment Funds (CEIF) 5 Financial Investment Companies (FIC) Fondul Proprietatea 4 Depositaries	
45% investment in OEIF 4% investments in CEIF 26% investment in FP 25% investment in FIC	

Although the volume of gross written premiums in Romania (including branches) increased significantly in 2019 compared to the previous year, the degree of insurance penetration in GDP (calculated as the ratio between the value of gross written premiums and GDP) was of 1.0% in 2019,

slightly decreasing compared to the previous year, due to the more pronounced dynamics of GDP compared to the increase in the insurance sector. The density of insurance (calculated as the ratio between the value of gross written premiums in Romania and the number of its inhabitants), an indicator that shows how much, on average, the inhabitant of a country spends on insurance products, increased in 2019, reaching 118 EUR per capita.

From the point of view of solvency requirements, the insurance sector is well capitalized, having eligible own funds to cover the Solvency Capital Requirement (SCR, according to Solvency II) in the amount of Lei 5.83 billion, 1.81 times larger than SCR.

Figure 10 Indicators regarding the insurance-reinsurance sector on June 31, 2020

The private pension system, as a whole, benefited of positive results in the first three quarters of 2020. Net assets in Pillar II and III reached Lei 72.55 billion. The rates of return obtained by private pension funds were positive, with no private pension fund having a rate of return below the minimum rate for its risk category.

Figure 11 Indicators regarding the private pension system sector on September 30, 2020

Private pension system
10 administrators
17 private pension funds
3 depositories
5 auditors
8,104,786 participants
Lei 72,546,844,620 net assets

1.6. The evolution of non-bank financial markets at European and international level

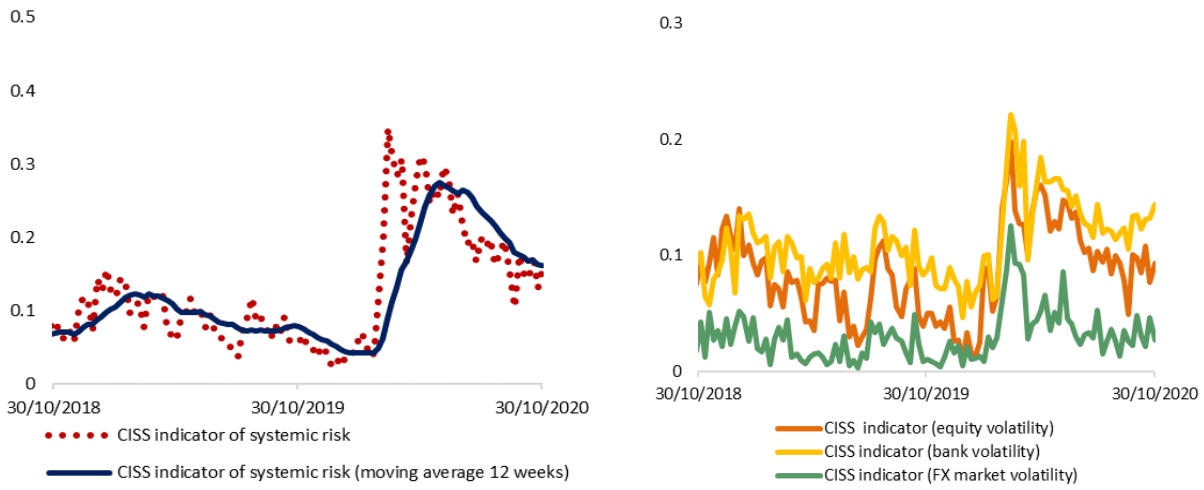
International financial markets had a mixed evolution in the first 10 months of 2020. In the first quarter, the main trend was the general increase in volatility due to the expansion of the health and financial contagion at the same time, having the immediate effect of significant declines in stock market indices connected to the prospects for a sharp decline in global GDP. The turmoil calmed down after the tension between March and April with the relaxation of restrictions and the

resumption of social and economic activities during the summer. However, the fourth quarter brought new concerns about the dynamics of the second wave of the pandemic and the need to identify solutions to reduce the risks to public health while reducing as much as possible a negative destructive impact on economies at global level.

The CISS composite indicator of systemic stress is calculated by the European Central Bank on the basis of and takes into account different sectors of the financial system: stock and bond markets, foreign exchange and money markets, etc. The CISS indicator is built to show the extent to which systemic financial stress contributes to the financial instability of European markets. The value of the indicator is constrained to be in the range (0,1) so that higher values indicate periods of financial stress for European markets.

The CISS systemic stress indicator tripled in volatility in the first quarter of 2020 amid a sharp appreciation of composite sub-indicators. The European Central Bank has taken a series of liquidity-boosting measures that have helped ease the investment climate over the next two quarters.

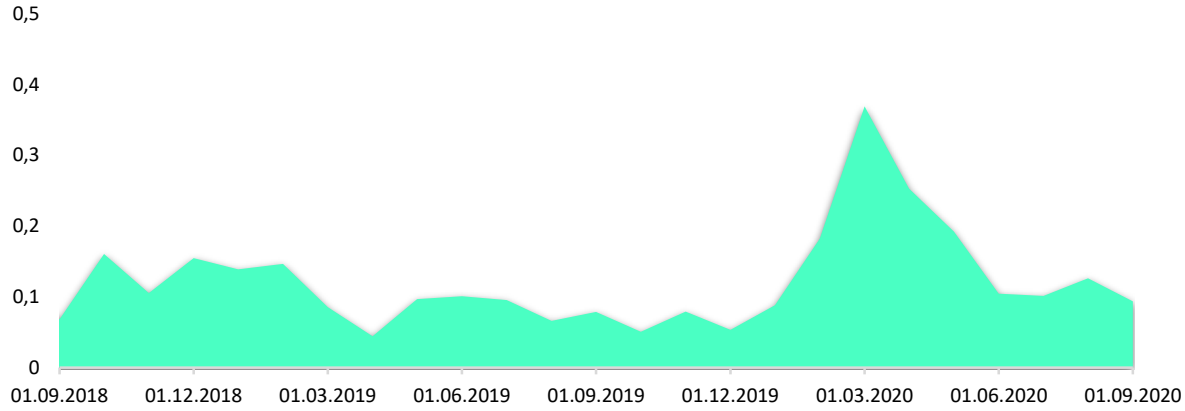
Figure 12 CISS indicator for systemic stress



Source: European Central Bank, FSA

CISS sub-indicators measuring stock, bond and foreign exchange market volatility showed a rapid upward trend in the first two quarters, followed by a slowdown in the third quarter.

Figure 13 Financial stress indicator - Romania (CLIFS)

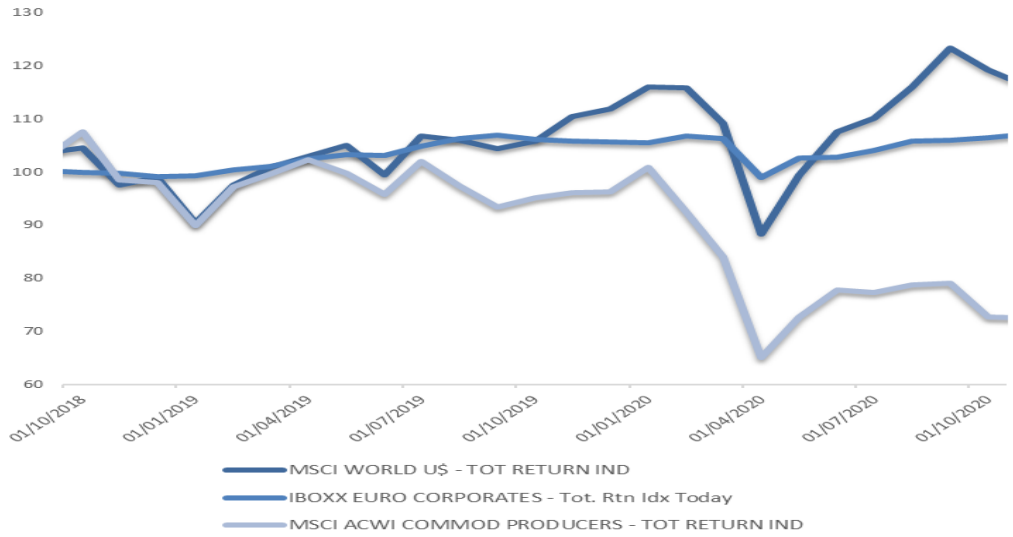


Source: European Central Bank

According to the CLIFS indicator, which is an index calculated by the European Central Bank to measure financial stress at the country level, Romania was characterized by the largest increase in financial tension of the European Union countries relatively at the beginning of 2020 and at the same time by the highest value of the indicator. It has followed international trends and has been declining since April.

In the first two quarters of 2020 there was a rapid increase in volatility in international financial markets (MSCI WORLD index). The level of risks associated with the financing of the corporate sector (IBOXX index) has increased, being dependent on the forecasts of decrease for the global GDP as a result of the manufacturing industry contracting (MSCI COMMODITIES PRODUCERS index).

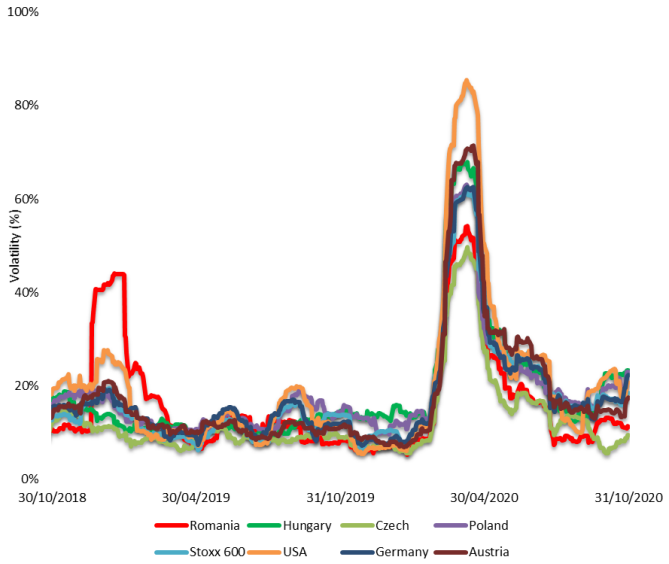
Figure 14 Evolution of volatility on stock, bond and commodity markets (2018 = 100)



Sorce: Refinitiv, FSA calculation

In the first quarter of 2020, the volatility of the Romanian capital market increased to a level very close to that recorded during the global financial crisis of 2007-2009. In the next two quarters, volatility had a downward trend.

Figure 15 The evolution of stock market volatility in Romania and in the countries in the region



Source: Refinitiv, FSA calculations (GARCH model)

Internationally, in September 2020 compared to June 2020, the most significant rise was registered by the NIFTY 50 index (IN: 9.18%), while the most significant fall was recorded by the IBEX index (ES: 7.12%). On a local level, the returns of the stock indices had positive evolutions, except for the BET-FI (-1.83%) and BET-NG (-0.79%) indices.

Table 6 Stock market returns as of October 30, 2020

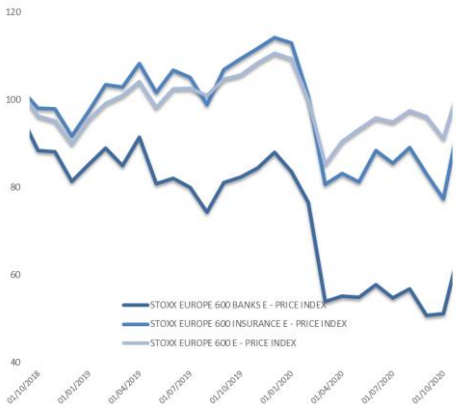
International indices	3 months	6 months	12 months
EA (EUROSTOXX)	-4.42%	3.45%	-14.26%
FR (CAC 40)	-3.96%	0.48%	-19.82%
DE (DAX)	-6.15%	6.40%	-10.18%
IT (FTSE MIB)	-6.02%	1.43%	-20.93%
GR (ASE)	-7.79%	-9.35%	-35.47%
IE (ISEQ)	5.38%	14.72%	-1.72%
ES (IBEX)	-6.18%	-6.79%	-30.30%
UK (FTSE 100)	-5.43%	-5.49%	-23.05%
US (DJIA)	0.28%	8.86%	-2.01%
IN (NIFTY 50)	5.14%	18.08%	-1.98%
SHG (SSEA)	-2.59%	12.74%	10.13%
JPN (N225)	5.84%	13.78%	0.22%

BSE indices	3 months	6 months	12 months
BET	1.58%	6.66%	-10.59%
BET-BK	-1.48%	4.27%	-8.99%
BET-FI	-7.27%	-3.31%	-7.45%
BET-NG	-0.89%	1.45%	-18.97%
BET-TR	2.44%	12.04%	-6.08%
BET-XT	-0.44%	3.77%	-11.66%
BET-XT-TR	0.42%	8.80%	-7.35%
BETPlus	1.46%	6.50%	-10.29%
ROTX	-0.71%	3.22%	-13.95%

Source: Thomson Reuters Datastream, ASF calculations
3M = 30 October 2020/31 July 2020; 6M = 30 October 2020/30 April 2020; 12M = 30 October 2020/31 October 2019 Note: Max. (green) and min. (red) are set at ± 4% (3 months), ± 8% (6 months) and ± 15% (12 months)

At European level, the indices related to the banking, capital and insurance sectors registered a sharp negative trend in the first quarter. In the second quarter, the downward trend reversed and the indices recorded modest increases, but remained below the level of the previous year. In the third quarter, the index for the banking sector continued to decline due to declining bank profitability and the accumulation of vulnerabilities due to the increase in the number of bankruptcies.

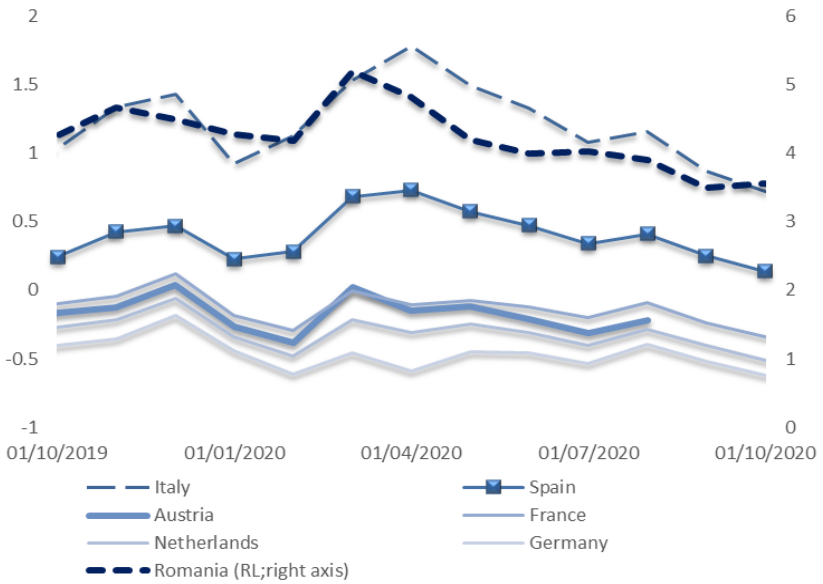
Figure 16 Evolution of indices of the banking sector and the insurance sector at European level (2018 = 100)



Source: Bloomberg, FSA calculations

In the fixed income instrument markets and in particular in the sovereign bond market, a gradual decline in yields was observed in the second and third quarters due to fears of a possible long-term recession and a reduction in monetary policy rates.

Figure 17 Evolution of yields on 10-year sovereign bonds



Source: Refinitiv, FSA calculations

2. Outlook on non-bank financial markets risks

2.1. Main vulnerabilities and risks identified by the supervisory authorities in the EU non-bank financial sectors

The European Supervisory Authorities' Joint Report on the Risks and Vulnerabilities of the EU Financial System2 shows that the outbreak of the coronavirus pandemic has led to disruptions in social life and unprecedented economic challenges, which will inevitably have an impact on the financial sector. Valuation, liquidity, credit and solvency risks have increased significantly at EU level. While the liquidity positions of European credit institutions remained relatively stable, the investment fund industry experienced a significant deterioration in asset liquidity combined with capital outflows from certain asset classes. The COVID-19 pandemic has led to liquidity challenges in certain segments of the investment fund sector and has amplified profitability concerns for all financial sectors. In addition, maintaining low interest rates will also influence the profitability and solvency of financial institutions. Pension funds are affected by both the pandemic and low interest rates, leading to declining funding rates. Uncertainties about the medium and long-term economic consequences of COVID-19 remain high, and financial markets are vulnerable to a potential decoupling from core economic activity, calling into question the sustainability of the recent market recovery. The use and dependence on information technology expanded during the COVID-19 pandemic, with related risks posing a key challenge for financial institutions.

Risks related to EU securities markets

If in the first quarter of 2020 the COVID-19 pandemic led to significant corrections in the stock markets, starting with the second quarter of 2020, they experienced a spectacular improvement, supported by the measures of public authorities (to contain the pandemic, fiscal and monetary), both at EU and global level. The report on trends, risks and vulnerabilities of securities markets[3], prepared by ESMA, highlights as a main risk a potential decoupling of financial market performance from core economic activity, calling into question the sustainability of the recent improvement.

The same main risk is maintained also in the EU Securities Risk Dashboard[4], published in November 2020, which further shows that financial markets have continued to recover and stock market prices have risen even further. There are signs of strong sectoral and geographical differentiation in financial markets, with the fixed income instruments sector increasing in value across various segments such as emerging markets, investment and high returns. Credit rating downgrades have slowed and investment funds have recorded capital inflows across asset classes, especially for bond funds. These developments, analyzed together, highlight the continuing risk of decoupling between asset prices and economic fundamentals. Thus, the potential for a sudden reversal in investor risk assessment is a key vulnerability for EU financial markets.

[2] Joint Committee on Risks and Vulnerabilities in the EU Financial System, September 2020

[3] ESMA Trends, Risks and Vulnerabilities Report, September 2020

[4] ESMA Risk Dashboard, November 2020

Liquidity and market risks remain high, while contagion, credit and operational risks are medium to high, with growth prospects. In the future, ESMA foresees an extended period of risk for institutional and retail investors due to high market corrections. The degree to which these risks will materialize depends on three factors: the economic impact of the pandemic; financial market expectations related to monetary and fiscal measures; and any occurrence of external events in an already fragile global environment. Given the important role of public authority supporting measures, especially fiscal and monetary ones, in reducing the economic impact of the pandemic, market perceptions of the adequacy and sustainability of these measures will significantly influence investment behavior.

According to ESMA, in the first part of 2020, financial markets went through three main stages: (i) a period of liquidity and volatility (mid-February - end of March), when financial markets, investment funds and market infrastructure experienced high levels of stress; (2) an improvement period (April), when financial markets rebounded due to supportive monetary policy measures; and (3) a period of differentiation (as of May 2020), when credit and solvency risks became prominent as investors began to differentiate between issuers and asset classes in the context of core economic fundamentals deterioration.

Market infrastructures faced high activity during the financial turmoil, with trading venues experiencing a high trading volume, as investors sought safe execution in a period of liquidity stress. Lately, these volumes have decreased, but still remain above pre-crisis levels. The central counterparties proved to be robust throughout the crisis, despite the rise in clearing activity and the steep rise in the initial and variation margin. Most EU counterparties have updated their modeling parameters to reflect recent market movements. The rating agencies responded to the abrupt economic deterioration by downgrading the affected issuers, especially those in the non - financial area.

In view of the initial impact of the COVID-19 pandemic on financial markets, EU investment funds have experienced a deterioration in liquidity in certain segments of fixed income investment funds combined with capital outflows from investors. Redemptions from fixed income investment funds peaked in March 2020, and some fund managers decided to suspend them, in part because of uncertainties in valuations, but also as a result of capital outflows. Between the second half of March and May 2020, some 200 investment funds in the EU and the UK had to temporarily suspend redemptions. Some ETFs were traded at large discounts, reflecting the liquidity problems of core assets, especially in March and April 2020. Also, some monetary funds were affected at the end of March in terms of exposure to the US money market. Starting with April 2020, the liquidity of investment funds has improved, with a capital inflows rise and a general performance profitability.

The negative impact of the COVID-19 pandemic on the real economy and financial markets affected retail and institutional investors, with confidence falling sharply in the first half of 2020, as the performance of financial instruments declined to very low levels. The distribution of financial assets remained concentrated in traditional savings channels, such as bank deposits, while direct investment in financial markets or in riskier assets, such as stock, remained at an aggregate level. However, the sharp decline in asset prices and the rise in volatility following the pandemic corresponded to a rise in share purchases and volumes traded by retail investors between February and March 2020.

Primary markets were also affected by the shock caused by the coronavirus, with shares and bond issues entering a period of stagnation, as low liquidity and high volatility increased the cost of

capital, with companies avoiding capital market financing. Although one of the priorities of the Capital Markets Union is to facilitate access to finance for EU companies, including SMEs, the latter relied more on bank lending during the crisis, with only a small share of stock markets as an external financing source. This trend is explained by government support measures, such as loan guarantees, and by the fact that securities issued by them are not eligible for purchase by the European Central Bank, thus lowering the appetite for external financing on capital markets.

The implications of the COVID-19 crisis on the development of sustainable finance are complex, but there are already signs that environmental issues have come to the attention of public authorities and will be included in their future policies, both fiscal and monetary. EGS (Environmental, Social and Governance) assets, such as stock indices and benchmark funds, outperformed normal assets in the first half of 2020 due to innovation capacity, prudential risk management, long-term objectives and flexible domestic policies. Investor appetite for ESG funds remained high with net capital inflows in the first half of 2020 comparable to net capital outflows for the rest of the own fund industry. The green bond market has continued to expand, although some agencies and governments have shifted to social bonds to counteract the socio-economic consequences of COVID-19.

Containment measures to control the COVID-19 pandemic are expected to accelerate the digitization of financial services, a positive trend overall by lowering the prices of financial products, but which may also lead to risks such as cyber risk, high concentrations market among data service providers and vulnerabilities in the Fintech sector. Cryptoassets have not been immune to the current crisis, but as a result of the steady improvement in April and May, total market capitalization has managed to surpass the levels at the beginning of 2020. "Stablecoins", including global ones, continue to represent a topic of discussion for central banks and regulators, given the risks involved, including those for monetary policy and financial stability.

Table 7 Trends and risks identified by ESMA in November 2020

The main risks

Risk segments	Level	Perspective	Risk categories	Level	Perspective	RIsk sources	Perspective
Overall ESMA remit		→	Liquidity		→	Macroeconomic environment	↑
Securities markets		→	Market		→	Interest rate	→
Infrastructures and services		→	Contagion		↗	Sovereign and debt markets	↗
Asset management		→	Credit		↗	Infrastructure disruptions	→
Consumers		↗	Operational		↗	Political and event risks	↑

Source: ESMA Report on Securities Trends, Risks and Vulnerabilities, November 2020

Risks related to insurance and private pension markets in the EU

According to the Financial Stability Report[5], the unexpected outbreak of the COVID-19 pandemic underscored the importance of the Solvency II regulatory framework, as, on the one hand, the risk-based approach has allowed better capitalization of insurance companies, and on the other hand, the adjustment of long - term guarantees has reduced the market volatility associated with the current crisis, reflected in own funds and / or solvency capital requirements. Strong capital buffers have helped insurance companies withstand the initial, severe market shocks. However, a high level of uncertainty about the magnitude of the economic deterioration and the continued rise in the number of infections affecting the health of European citizens may lead to increased risks in the near future. The prolonged low yields environment was a fundamental risk for the insurance and pension sectors, which the COVID-19 pandemic amplified even more. The immediate economic downturn will negatively impact companies' profitability, resulting in rating downgrades, rising bankruptcies and unemployment rates. The high connection of insurance companies with credit institutions could attract the spillovers of these risks from the real economy to insurers and pension funds. The ambiguity regarding the coverage of coronavirus claims could result in the extension of litigation for insurers. Containment and teleworking measures have also led to increased cyber risks and emphasized the importance of a strong cyber risk insurance market.

Following the questionnaire conducted by EIOPA among the competent national authorities on the potential risks that could materialize from the shock of COVID-19 regarding the financial stability of the insurance sector, 6 key vulnerabilities were identified: profitability of the investment portfolio, solvency position, exposure to the banking sector, underwriting profitability, concentration on domestic sovereign and cyber risk.

Based on the qualitative questionnaire, the **investment profitability portfolio** presents the highest risk to the insurance sector in terms of materiality, with more than 10% of responses indicating the need to strengthen existing measures, although no new measures are considered necessary.

Despite adequate capital positions of insurers before the impact of COVID-19, **solvency** is ranked as the second highest risk for the insurance sector, with 15% of National Competent Authorities (NCAs) considering the need to reinforce existing measures or introduce new measures.

The risks related to the **exposure to banks and the degree of concentration of the domestic sovereign** are ranked on the 3rd and 5th places, respectively, with 10% of the answers indicating the need to consolidate or introduce new measures.

The risk of decreased **underwriting profitability** is on the 4th place, in terms of the materiality of the risk according to the questionnaire, with 10% of the responses indicating the need to consolidate or introduce new measures. For the life insurance sector, the underwriting profitability is expected to be impacted by a reduction in premiums rather than a rise in claims.

Regarding **cyber risk,** the questionnaire further indicates that the COVID-19 pandemic could significantly impact the business models of insurance companies. Some risks, which could take a long time to materialize after the impact of COVID-19, could put additional pressure on insurance companies in the future.

[5] Financial Stability Report, July 2020

The asset allocation strategy for insurers remained broadly stable, with dominant exposures to fixed income assets and stocks, exposing insurers to fluctuations in market valuations due to the shock of COVID 19. Government and corporate bonds account for about two-thirds of the total investment portfolio, while the shares (listed and unlisted) follow from the point of view of materiality, making the portfolios of insurers, at the level of the European market, susceptible to interest rate risk, credit risk and own funds. Amid the uncertainty in the financial markets and the disappearance of the pandemic, investment decisions on a potential rebalancing of portfolios are expected to be a challenge for insurers. Ultra-low interest rates, higher risk premia and an potential increased need for liquidity could rise the risk of allocating assets that do not match the characteristics of the liabilities. Moreover, uncertainty about stock markets and its apparent trajectory different from the economic outlook, as well as uncertainty about alternative investments, could rise the risk that strategic asset allocations will not be effective. The focus on lower quality bonds, for some countries, accompanied by a higher risk of rating downgrades, due to COVID-19, could be a channel for transmitting risk to the insurance sector.

Changing demand dynamics could impact insurers' liquidity positions due to low premium flows. The liquidity risk for the insurer could be triggered by unit-linked policies, whose underlying funds have liquidity problems.

Insurers use derivatives to hedge risks in investment and underwriting portfolios, but due to increased interest rate volatility, they may face liquidity shortfalls due to margin calls on their interest rate swap derivatives portfolios.

The impact of COVID-19 has affected the economy in several sectors and is expected to have a longer-term impact on the insurance sector as well. A second wave of pandemic would further amplify the effects analyzed. The main risks for the insurance sector, identified during the crisis, are related to low economic growth accompanied by low returns, the risk of possible rating downgrades, investment behavior and interconnection with banks, profitability (underwriting and investment) and potential rise in liquidity needs and increasing cyber risk.

In order to effectively manage the situation created by the current crisis, a number of measures have been applied in a consistent way by the Member States to ensure an operational relief for EU insurance companies: extending reporting deadlines, suspending less important inspections, postponing the entry into force of national legislative initiatives and policy initiatives. Postponing and / or reducing the payment of dividends, as a result of EIOPA's recommendations, has been another measure taken by many Member States.

After a year of positive returns, EU occupational pension funds have been hit hard by market turmoil in the context of the COVID-19 pandemic. Due to the nature of the crisis, occupational pension funds will face both market volatility and impairment of market values in a low interest rates environment and concerns about funding and liquidity as a result of suspended or lowered contributions from sponsors and members. Sponsors in the sectors affected by COVID-19 are expected to face non-payment and members of these pension funds will become unemployed. The financial difficulties of the sponsors or even their insolvency, in the worst case, can test the national pension protection schemes. The way pension schemes are organized is heterogeneous at Member State level and the possible need to use them requires special attention in terms of supervision. The impact of the COVID-19 crisis may lead to diminished benefits for members and / or may require sponsors to provide more funding, putting additional pressure on the real economy.

According to the Insurance Market Risk Dashboard[6], published by EIOPA, risk exposures for the European insurance sector remain very high for macro, while falling from high to medium for credit, market, profitability and solvency risk.

- Macro risks remain very high, given the persistent global impact of the COVID-19 outbreak on economic activities, intensified by the second wave that has already occurred in several EU countries. GDP growth forecasts remain negative for the third and fourth quarters of 2020, but have been revised upwards for all geographical areas, while the inflation rate remains low and is expected to decline for the next three quarters. However, the effects of the new wave of the pandemic may tip the decline in GDP.
- Credit risk has decreased to medium level. CDS spreads continued to decline in all market segments in September, remaining above the levels before the COVID-19 crisis.
- Market risks have decreased to the medium level. Financial markets stabilized in the first half of 2020, while concerns about financial market performance and the economic outlook that could lead to potential market correction remain. Stock and bond market volatility continues to decline, reaching lower levels than before the COVID-19 crisis for bond markets.
- Profitability and solvency risks have decreased to the medium level. The SCR ratio for groups improved slightly, although it remained at lower levels than in the last quarter of 2019, and all half-yearly profitability indicators, which include the first months of the COVID-19 crisis, show the expected signs of deterioration.
- Insurance risks remain at medium level, driven by general concerns about declining premium growth and, in some countries, about the adequacy of reserves. Specifically, the annual rise in life insurance premiums reported significant deterioration for the second consecutive quarter, already indicating a negative impact due to the COVID-19 pandemic.
- While market perceptions are declining, they are still at medium level. Since June 2020, the shares of life and non-life insurance companies have outperformed the market. The median price-to-earnings ratio of the insurance groups in the sample increased slightly, dispersing from the low levels reached in the first half of 2020. External assessments of insurers and external prospects of insurers remain broadly stable since the risk assessment in July 2020. Concerns about financial market performance and the economic outlook that could lead to potential market correction remain.

[6] EIOPA Risk Dashboard, November 2020

Table 8 EIOPA Risk Dashboard for October 2020[7]

	Risks	Level	Trend (last 3 months)	Outlook[8] (next 12 months)
1.	Macroeconomic risks	**Very high**		
2.	Credit risks	**Medium**		
3.	Market risks	**Medium**		
4.	Liquidity and funding risks	**Medium**		
5.	Profitability and solvency	**Medium**		
6.	Interlinkages and imbalances	**Medium**		
7.	Insurance risks (underwriting)	**Medium**		
8.	Market perceptions	**Medium**		

Source: Risk Dashboard, EIOPA, November 2020

2.2. The main risks and vulnerabilities at national level

Risks related to the private pension market in Romania

The private pension system remains one of the least affected segments in the context of the international uncertainty generated by the COVID-19 pandemic, due to its particularity characterized by long-term savings and investment, in the context of a prudent, balanced and diversified investment policy, which has allowed since its inception to go through the turbulent periods that have taken place so far successfully and on positive territory. This time also, private pension funds have exceeded the period of high volatility in March this year, stabilizing and adapting to the new conditions in the financial markets.

Credit risk for private pension funds remains medium to low, given the volatility in financial asset prices generated by the COVID-19 pandemic. However, the largest exposure of private pension funds with defined contributions is to the Ministry of Public Finance (67% - as of September 30, 2020). At the same time, the largest share of the value of assets corresponding to the technical provision is invested in government securities issued by the Ministry of Public Finance (93% - on September 30, 2020).

Liquidity risk continues to be low, as the private pension system continues its accumulation period, the level of payments and outflows being very low, due to the demographic structure of the population which has many more years to come until the number of retirement applications becomes relevant for liquidity management.

[7] The reference date for company data is Q2-2020 for quarterly indicators and the end of 2019 for annual indicators. The deadline for most market indicators is the end of September 2020

[8] The outlook for the next 12 months is based on the responses received from the competent national authorities (NCAs) and is classified according to the expected change in the materiality of each risk (Substantial drop, drop, unchanged, rise and substantial rise).

Market risk remains relevant for defined contribution pension funds such as the one in Romania, but it has been managed prudently by administrators by diversifying portfolios and focusing on fixed income instruments with medium- and long-term maturity.

The solvency risk for the administrators of the private pension funds remains low, in the context in which there is a rise in technical provisions specific to the private pension system - Pillar 2 for all 7 administrators of privately managed pension funds, which confirms the ability of administrators to honor their obligations arising from the guarantee of their contributions towards participants.

The profitability risk of the administrators of the private pension funds is at medium level, with a decreasing tendency, as an effect of the adjustment of the legislative provisions regarding the level of administration fees which constitute operating income for the administrators of the pension funds from Pillar II.

The concentration risk is structural and remains high for private pension funds in Romania and for their depositories. However, the regulatory framework has been developed to allow for numerous check mechanisms and increased transparency in order to eliminate from the beginning any potential vulnerabilities that could evolve from the risk of concentration.

Risks related to the Romanian insurance market

According to the latest available data (June 2020), the risks of Romanian insurance companies are at a medium level, increasing due to the high degree of uncertainty generated by the current public health crisis.

The **business risk** has increased, given that the Romanian insurance market was affected in the second quarter of 2020 as a result of the effects of the COVID-19 pandemic and the containment measures. The rise in the volume of gross written premiums in the first 6 months of 2020 compared to the same period of the previous year is due exclusively to the positive dynamics recorded in the first quarter of 2020, given that the value of gross written premiums decreased in the second quarter of 2020 compared to the previous quarter, as well as compared to the similar period of the previous year.

Profitability and solvency risk remained at medium level. In the medium and long term, in the context of the current ultra-low interest rates environment, they can have a negative impact on the solvency and profitability of insurance companies (especially in the life insurance segment), due to the risk of reinvestment in bonds with lower yields as bonds currently in insurers' portfolios mature. All these cumulative adverse developments indicate a double impact for insurers: both on the assets side and on the debt side, with potential negative consequences on the solvency and financial position of companies. At the end of the second quarter of 2020, both the value of the assets and the obligations of the insurance companies increased compared to the end of the last quarter of 2019, before the occurrence of the risk related to the COVID-19 pandemic. As a result of the positive dynamics of total assets, the value of the surplus of assets over liabilities also increased during this period, which is the main component of the Tier 1 items related to eligible amount of own funds to cover capital requirements.

The combined ratio, an indicator of the profitability of insurance companies, placed sub-unitary the first half of 2020, decreasing compared to the similar period of the previous year, which shows a slight improvement in the profitability of insurance companies in the case of non-life insurance. The

combined ratio on the main insurance lines of business (A3 - CASCO and A10 - MTPL and CMR) has also decreased, but continues to be at supra-unit values both at the aggregate level, on the 2 insurance lines of business, and for most of the insurance companies.

Liquidity risk is also at a medium level. A rise in the volume of claims (especially in certain business lines: life insurance, health) due to the effects of the COVID-19 pandemic, simultaneously with the drop in the volume of gross written premiums determined by the entire economic activity slowdown and the increases of unemployment rates likely to impact demand for insurance products and a potential contraction in households disposable incomes could put medium- and long-term pressure on insurance companies' liquidity. In this context, the increased risk of termination may also have negative implications for insurers' liquidity. The liquidity ratio, calculated as the ratio between the value of liquid assets and short-term liabilities of insurers towards policyholders, increases slightly on June 30, 2020 compared to the levels recorded on March 31, 2020, both for non-life insurance and for life insurance activity.

The **concentration risk** remains at high level for the Romanian insurance market. From the perspective of exposure by classes, the Romanian insurance market is characterized by a high degree of concentration both for the non-life insurance segment (the dominance of car insurance in the local market) and in terms of life insurance activity. The highest values of underwriting are registered by car insurance, classes A10 (MTPL and CMR) and A3 (CASCO) representing approximately 70% of the non-life insurance market. The value of the underwriting related to class C1 (life insurance, annuities and supplementary life insurance) and C3 (life insurance and annuities, related to investment funds) represents approximately 90% of the total volume of gross premiums written for the life insurance activity.

Also, there is a rise in the degree of concentration on the Romanian insurance market from the perspective of the volume of gross premiums written by insurance companies for the non-life insurance activity, especially for the MTPL market, in which case there is a significant rise in the market share of an insurance company during the period 2016 - 2020.

The **conduct risk** is at medium to high level, with a rise in the number of complaints and notifications registered with the FSA. Of the **21,244 non-compliance complaints and notifications** registered in the first semester of 2020 for the **insurance-reinsurance market, 18,111 non-compliance complaints and notifications** were **uniquely registered**. An analysis of the structure of the complaints according to the insurance classes shows that about **96% of them are registered for class A10**, compulsory motor third party liability insurance (MTPL and CMR).

The compulsory motor third party liability insurance (MTPL) is the product for which most complaints are sent, which mainly aim at *non-compliance with the provisions of the legislation in the field and with the norms of the Financial Supervisory Authority / contractual terms*.

The insurance companies for which the highest number of complaints and non-compliance information was uniquely analyzed in the first half of 2020 were **Euroins** (11,225) and **City Insurance** (5,129), the insurers with the highest market shares in the non-life insurance segment. In the case of both insurance companies there is a significant rise in the number of complaints and non-compliance information compared to the first half of 2019. The cumulative number of complaints against the 2 companies represents **approximately 90% of the total number of complaints submitted to FSA for the insurance sector**.

Considering the latest evolutions and trends on the Romanian insurance market, FSA carried out ad-hoc inspections at a series of insurance companies. During July-September 2020, the ad-hoc inspection of Euroins Romania Asigurare Reasigurare SA took place. As a result of the inspection action, a series of deficiencies were found regarding the calculation of technical provisions as of March 31, 2020, as well as the erroneous registration of operations for the recognition of reinsurance fees. At the same time, following the verification of the reports submitted by the company as of June 30, 2020, a series of deficiencies were found regarding the calculation of technical provisions, in accordance with the requirements of Solvency II Directive (Law No. 237/2015), as well as regarding the way of determining and reporting the basic own funds that cover the solvency capital requirement and the minimum capital requirement.

As a result of the deficiencies found, the Financial Supervisory Authority applied a series of sanctions[9]. In addition, the company has the obligation to submit to the Financial Supervisory Authority a recovery plan in order to redress the solvency positions, in accordance with the provisions of the law. The company must also review the MTPL premium rates, taking into account the deficiencies found, within 90 days from the date of communication of the decision.

Risks related to the Romanian capital market

Overall, the risk on the Romanian capital market remains at high level, with growth trends, in the context in which the stock exchanges react quickly and anticipatively to any stress that could disrupt economic, social, political developments, etc. Although a rare event, the current pandemic is no exception. Capital markets have incorporated expectations for resolving the crisis situation or the economic impact, but there is still a high degree of uncertainty and the situation may flare up again if new risks arise or developments do not go hand in hand with expectations. In addition, the Bucharest Stock Exchange remains the main link with the Romanian state, between the entities in the non-bank financial market, the market shocks being transmitted to a greater or lesser extent, depending on the individual and aggregate investment strategies adopted by the insurance companies, the investment funds and the private pension funds.

The liquidity risk on the Bucharest Stock Exchange remains at medium level. The daily traded value in the first nine months of 2020 increased by 32% compared to the 2019 average. Also, BSE's capitalization did not fully recover the fall registered in 2020, decreasing by approximately 27% compared to December 2019.

For the investment fund industry, the **liquidity risk** may rise sharply in times of high volatility and adverse market developments. In order to prevent systemic reactions, the applicable European legislative framework encourages the liquidity stress testing [10] and allows the use of liquidity management tools in times of difficulty. Investment funds in Romania had massive net redemptions in April 2020, but the aggregate level of underwriting later returned to positive territory, after calming the situation on the international and local capital markets.

The **concentration risk** remains at high level on the investment fund depositary market.

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[9] https://asfromania.ro/informatii-publice/media/arhiva/7275-sanctiuni-aplicate-de-consiliul-autoritatii-de-supraveghere-financiara

[10] https://www.esma.europa.eu/sites/default/files/library/esma34-39-97_guidelines_on_liquidity_stress_testing_in_ucits_and_aifs_en.pdf

Between June and August, the **contagion continued to decline**, while the social distancing conditions taken by all European economies were lifted. In the absence of other economic shocks, the contagion narrowed, returning to the long-term average in September. In October, the contagion began to grow slightly and will continue to grow as a result of the re-introduction of lockdowns in several European economies.

In the third quarter, amid growing uncertainty in international capital markets, the Romanian capital market index was influenced by the evolution of foreign markets, especially by the evolution of the main capital markets (USA and Germany).

Operational risk caused by IT infrastructures

In the context of the crisis generated by COVID-19 and of the containment measures, most of the activity of the entities supervised by FSA is carried out remotely. Thus, the cyber risk is at a high level, increasing, as a result of the intensification of the number of cyber-attacks, according to the information published by CERT-RO:

- spoofing attacks (falsification of the return address of the e-mails sent, in order to hide the identity of the real address where the message comes from) targeting users, but also public institutions and private organizations in Romania;
- brute-force attacks targeting Remote Desktop connections;
- phishing attacks that use the image of international organizations (WHO, World Bank);
- phishing campaigns that use COVID-19 as a subject to force the installation of a remote administration tool;
- attacks using the Qbot banking trojan and which targeted customers of financial-banking organizations in the US, Romania, Canada and Greece. In Romania, the campaign targeted customers of platforms that use internet banking services through browsers (Chrome, FireFox, Microsoft Edge) and not through dedicated applications;
- e-mail distribution of different types of malware, with messages related to Coronavirus.

Table 9 Risk Dashboard for non-bank financial markets in Romania

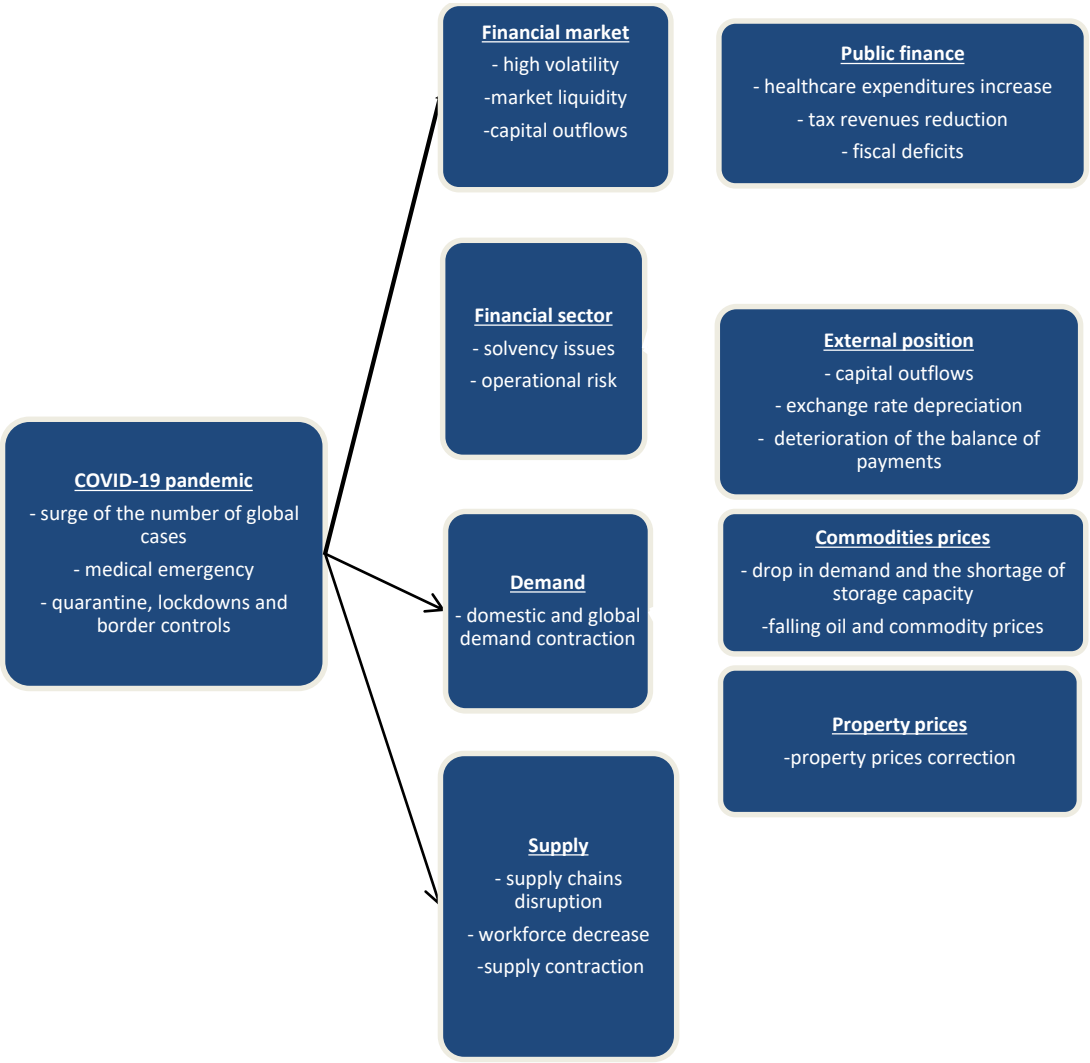
Segment	Aggregate level of risk		Trend	Risk categories
Private pension market	Medium to low		↘	*Market risk* *Liquidity risk* *Credit risk* *Profitability risk* *Solvency risk* *Concentration risk* *Conduct risk* *Cyber risk* *Operational risk*
Insurance market	Medium		↗	
Capital market	High		↗	
IT infrastructures	High		↗	

Source: FSA, October 2020

3. Interconnection of non-bank financial markets

After a year since the outbreak of the global pandemic, the economies continue to face economic and financial difficulties. To date, there has been no other infectious disease that has had more than a marginal effect on financial market volatility. As of February 24, 2020, news of COVID-19 infections has dominated other international events and acted as a global risk for the global economy.

Although public policies taken by states have helped to avoid a deep financial crisis and maintain credit flows to the economy, economic perspectives and estimates remain uncertain and sometimes contradictory while latent vulnerabilities occur in several economic sectors and geographical areas.

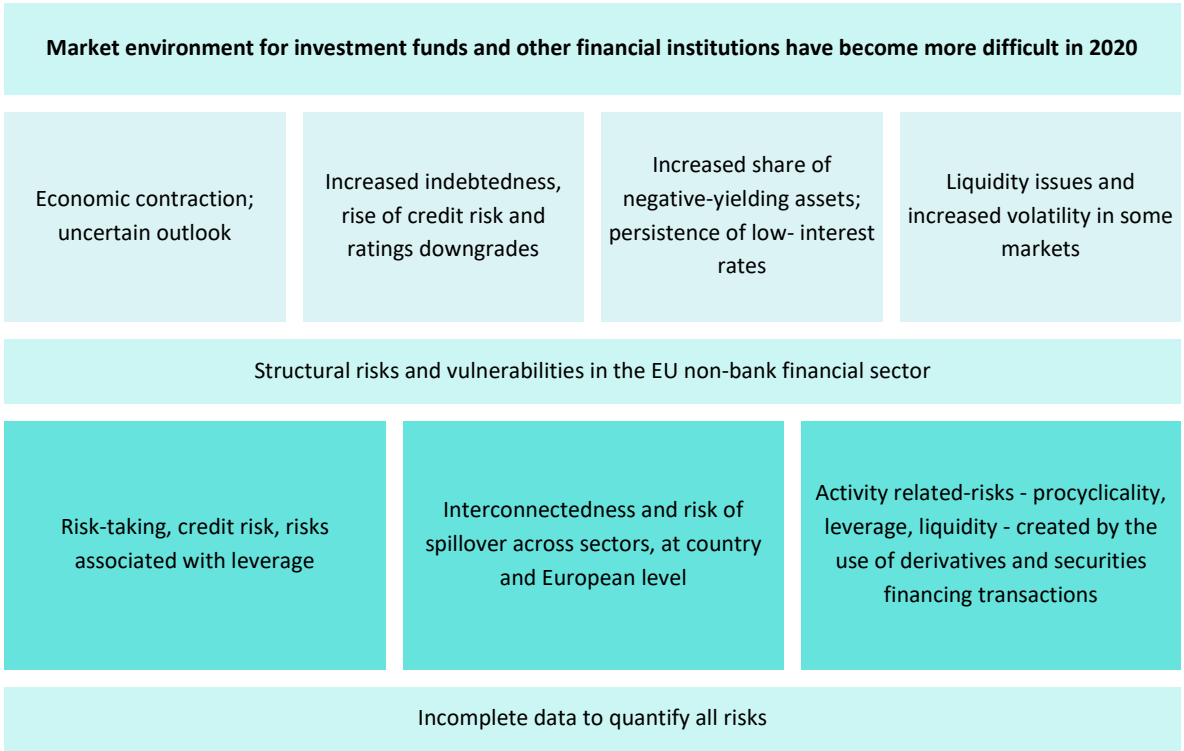


Source: IMF

The contraction of the economy and the uncertainties regarding future evolution may lead to a drop in share prices, with an impact on the profitability of on the three non-bank financial markets supervised by the FSA. If pension funds and life insurers are long-term investors, acting as a volatility buffer, investment funds and other insurers may be forced to sell assets to meet redemptions requests or damages claims. These - sales can result in large losses if entities are forced to fire-sale in markets with low liquidity or high volatility. Such a shock may be exacerbated if investors in multiple markets are under pressure to liquidate positions held in the same asset classes.

The impact of COVID-19 on the liquidity of non-bank markets

In its EU Non-bank Financial Intermediation Risk Monitor[11], ESRB identifies the most important risks and vulnerabilities of the non-bank financial sector in the EU (both at country and EU level):



Some of these risks are also important for markets supervised by FSA. At the same time, any shock on the external markets in the EU can also be transmitted on the Romanian market through various channels: entities belonging to the same group, economic contraction, interest rate, or capital outflows.

Given the overlapping of assets in the portfolio of entities in non-bank and banking markets (listed shares, corporate bonds and government securities) a shock on one of the sectors may spread to the others (see Figure Network of exposures of non-bank financial markets by types of assets).

Mainly, shocks can spread through two channels:

i. through direct exposures of entities in one sector to entities in another sector, and
ii. substantial liquidations of assets by entities in one sector ("fire-sale"), with an impact on the liquidity and value of assets held by entities in another sector.

One of ESRB's main concerns is the **risk of rapid and systemic corporate bond downgrades[12]**, in particular, the downgrade from BBB to "junk". Such a situation would be problematic for all three sectors, both in terms of yields and investment policies or regulations, which could lead to a forced sale of these bonds. ESRB estimates that, at the European level, in a severe scenario, this could lead

[11] EU Non-bank Financial Intermediation Risk Monitor 2020, https://www.esrb.europa.eu/pub/pdf/reports/nbfi_monitor/esrb.202010_eunonbankfinancialintermediationriskmonitor2020~89c25e1973.en.pdf

[12] A system-wide scenario analysis of large-scale corporate bond downgrades, https://www.esrb.europa.eu/pub/pdf/system_wide_scenario_analysis_large_scale_corporate_bond_downgrades.en.pdf

to initial losses (due to ratings downgrade) of EUR 150-200 billion, with additional losses of 20-30% due to massive sales in markets under pressure ("*fire sales*").

Given the **liquidity risks** that may arise as a result of the factors described above, ESRB[13][14] urged ESMA and EIOPA to improve the monitoring of liquidity risk in the capital and insurance market sectors.

So far[15], EIOPA considers that liquidity risks are well managed by insurers and that there is no evidence of potential systemic problems.

ESMA[16] said that in the case of investment funds, the COVID-19 pandemic has led to liquidity risks deterioration, but the sector has coped with them mainly due to measures taken by central banks and regulators. However, ESMA emphasizes the importance of continuing to monitor the preparedness of investment funds to manage possible new liquidity stress episodes. Thus, ESMA recommended to the competent national authorities to intensify the supervision actions for investment funds with significant exposures to corporate and real estate bonds, which are less liquid asset classes.

The spillover between the real economy and non-financial markets is not one-way, **as disturbances on the latter could lead to an increase in financing costs for companies**, which would further amplify the economic contraction.

Containment efforts have limited the spread of the new coronavirus, but have caused a decline in economic activity. Quarantine in certain areas, closure of non-essential businesses, travel restrictions and social distances measures are immediate actions to slow the spread of the virus and to support the healthcare system in reducing the deaths toll from the virus. In this context, we can expect a fall in the production and consumption of goods and services, dampening the boost of the economic activity by using conventional policy instruments.

The COVID-19 pandemic has had and will continue to have major repercussions on the global economy, disrupting supply chains and aggregate demand. The hospitality, retail, leisure and tourism sectors were the most heavily hit, and other industries such as automotive and electronics remain vulnerable to the fallouts of the pandemic.

Households were impacted by declining incomes and rising unemployment. Several factors including loss of wages, drop in confidence, rise of borrowing costs, exposures and thus counterparty risk increase will lead to a large drop in investment and private consumption, thus prolonging the contraction in demand.

The long-term effects of the pandemic include high production costs caused by reduced labor force and productivity amid the increased number of bankruptcies.

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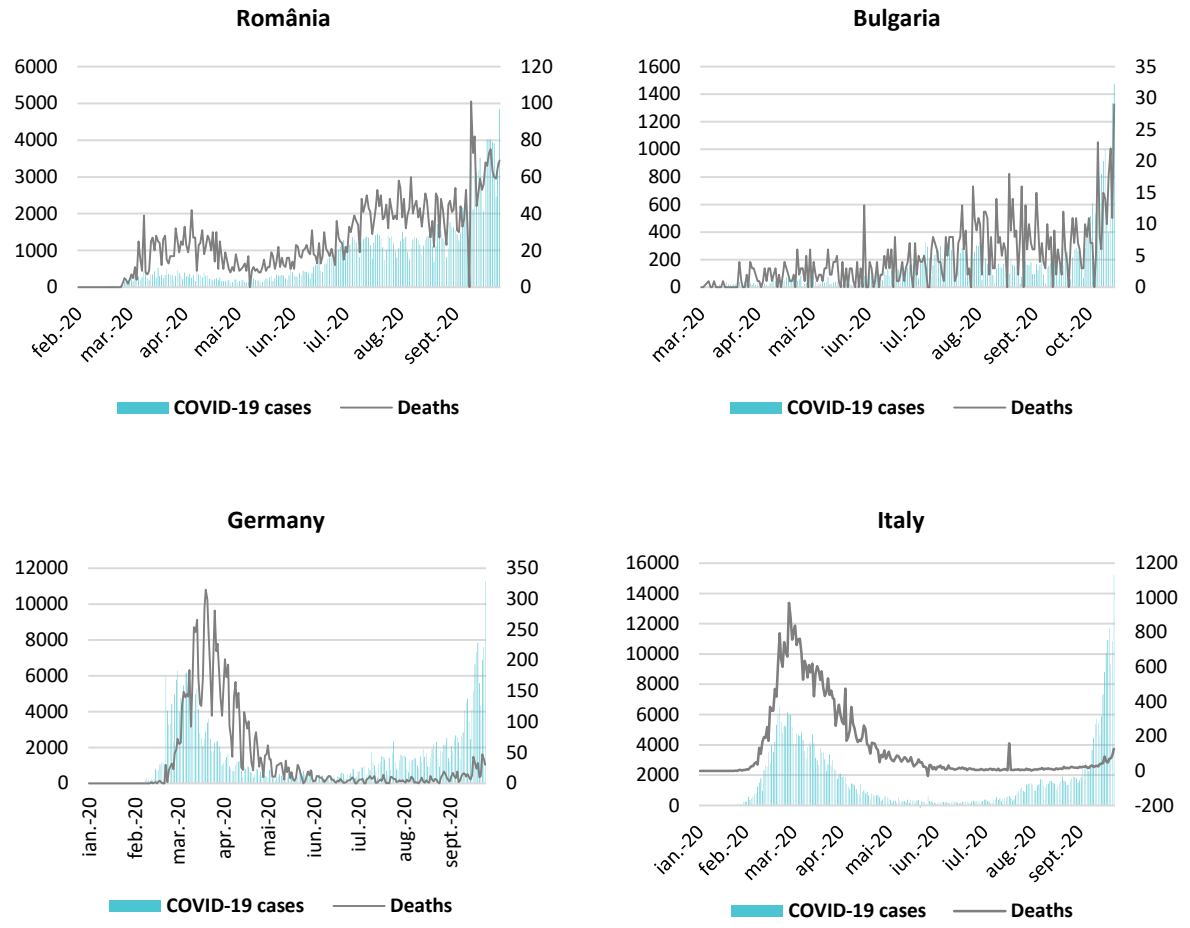
[13] ESRB Note to EIOPA with regard to the liquidity risk, https://www.esrb.europa.eu/pub/pdf/other/esrb.letter200608_to_EIOPA_on_Liquidity_risks_in_the_insurance_sector~e57389a8f1.en.pdf

[14] ESRB recommendations on the management of liquidity risk by investment funds, https://www.esrb.europa.eu/pub/pdf/recommendations/esrb.recommendation200514_ESRB_on_liquidity_risks_in_investment_funds~4a3972a25d.en.pdf

[15] EIOPA response to ESRB on liquidity risk, https://www.eiopa.europa.eu/content/eiopa-supports-esrb-call-enhancedmonitoring-liquidity-risks-insurance-sector_en

[16] ESMA's response to the ESRB, https://www.esrb.europa.eu/pub/pdf/recommendations/esrb.recommendation200514_ESMA_public_statement~227bb83053.en.pdf

Figure 18 Daily evolution of COVID-19 cases in European countries

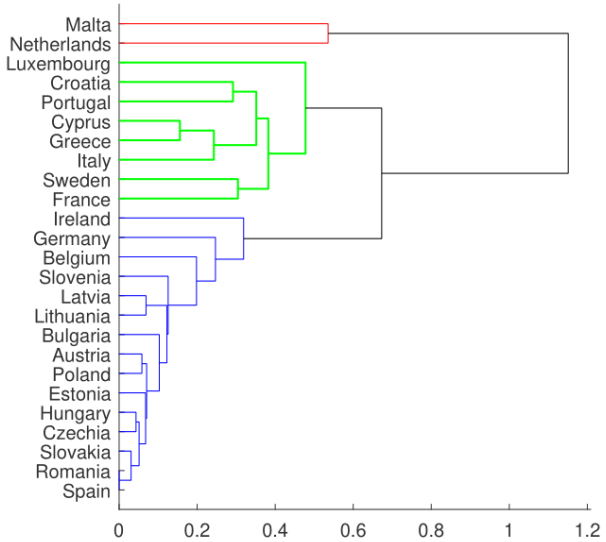


Source: ECDC (october 2020)

Recent developments (October 2020) indicate a rapid increase in the number of infected individuals and in the number of deaths. Recent containment measures taken by the authorities will emphasize the macro-financial shocks.

The analysis of the spillover at EU level shows the speed by which some economies take over the economic shocks. With the help of the cluster analysis on the monthly data of the industrial production indices, two groups of economies were identified within the European economy . The first group of countries includes the economies: Luxembourg, Croatia, Portugal, Cyprus, Greece, Italy, Sweden, France, and Ireland. The second group of countries contains the following economies: Germany, Belgium, Slovenia, Latvia, Lithuania, Bulgaria, Austria, Poland, Estonia, Hungary, the Czech Republic, Slovakia, Romania and Spain. The first group is represented in the dendrogram in green and the second in blue.

Figure 19 Dendrogram of industrial production indices in the European Union

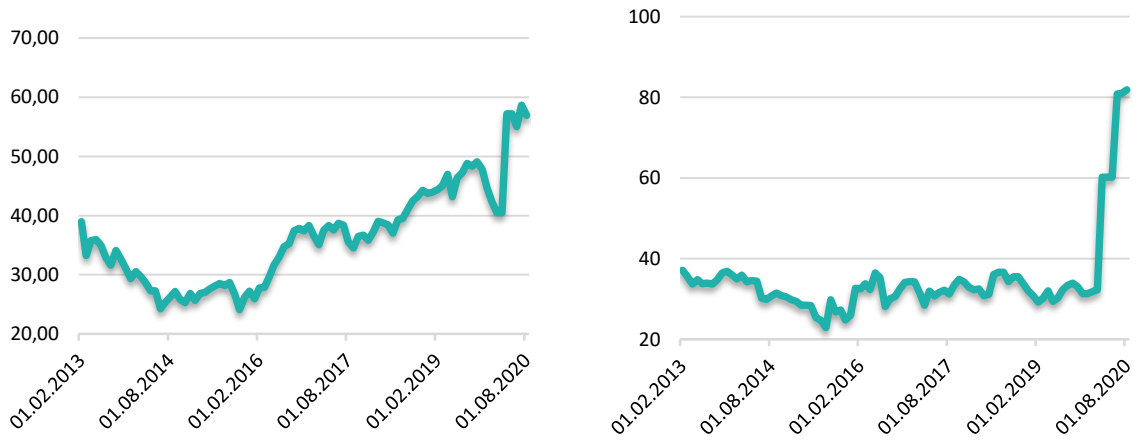


Source: Acatrinei (2020)[17]

Based on a Vector Autoregressive model, a spillover index was built based on industrial production indices for the two groups of economies, identified in the European Union, during the period 2010-2020.

The results of the analysis indicate a rapid response, transmitted by spillover, between European economies, with the change of the business cycle. Less developed economies absorbed asymmetric shocks amid structural economic problems, pre-existing in these economies, which allowed for the rapid expansion of economic shocks.

Figure 20 Spillover index a) the first group of countries (left) b) a second group of countries (right)



Source: Acatrinei (2020)[18]

[17] Acatrinei, M., 2020. idem

[18] Acatrinei, M., 2020. idem

3.1. Increased interconnection caused by the COVID-19 pandemic

The economic impact generated by the pandemic is intensified by the interconnection of the global economy. The pandemic has affected long-distance travel, cross-border transport, diminished the density of supply chains, and thus inventory stocks that are very vulnerable to supply disruptions.

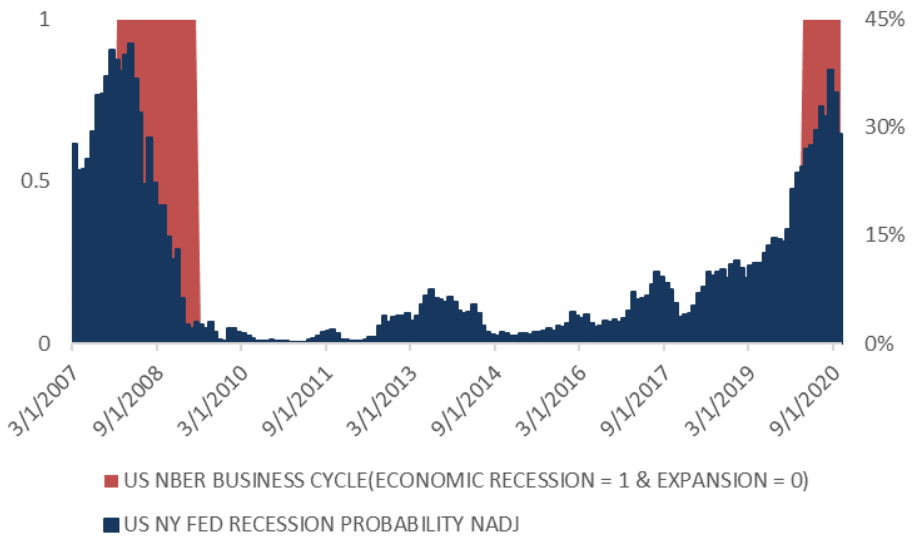
The reduction of external demand will decrease the Romanian exports to its main trading partners (Germany, Italy, France, Hungary, Great Britain, Bulgaria, Poland, Spain, Czech Republic, Turkey, the Netherlands), having thus a significant impact on GDP.

At the same time, as the economy is service-oriented, involving direct interactions, any sudden change that imposes social distancing brings a rapid decline in demand for such services. There are exceptions: IT services, certain financial services, transportation.

Globally imposed containment policies have reduced labor flows to companies, leading to a sudden and massive reduction in the production of goods and services.

The interconnection of economies and financial markets has allowed for an instant reaction and a uniform transmission of shocks to all economies.

Figure 21 Measures to assess the probability of recession



Source: Atlanta Fed, NBER, Refinitiv, FSA calculations

Although there is no direct causal link between the US recession and major economies, the US recession influences the economic dynamics of major economies.

The probability of recession is an early warning indicator[19] for being in a recession calculated for the US economy. When the indicator [20] exceeds 50%, it can be considered that the American economy is in a recession. The indicator rose rapidly in February and March and indicates that the US economy

[19] http://econbrowser.com/recession-index

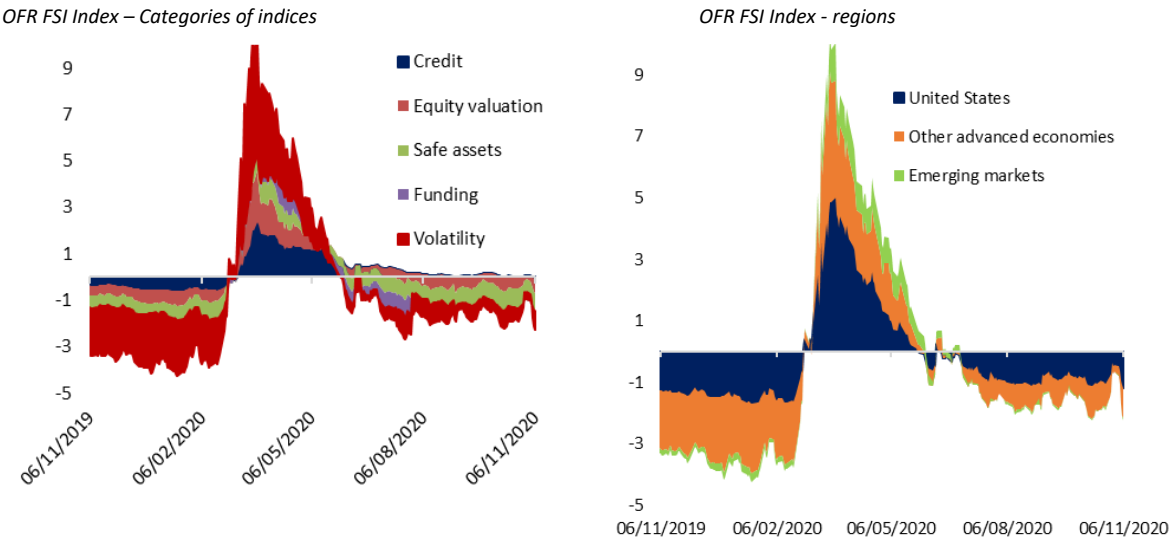
[20] Chauvet, M., & Hamilton, J. D. (2006). Dating business cycle turning points. Contributions to Economic Analysis, 276, 1-54.

has been a recession in the first quarter of the year. According to the NBER[21] methodology, the US economy went into recession in February.

3.2. The level of stress in the financial system

The Office of Financial Research[22] (OFR) has developed a financial system stress index to identify potential vulnerabilities in the financial system, system weaknesses that can generate, amplify and transmit tensions in the US and/or international financial market. Financial stress can be detected by the way variables move together over time.

Figure 22 Financial Stability Index for the US Economy (OFR FSI)



Source: OFR, FSA calculations

The Financial Stress Index (OFR FSI) provides an overview of the level of tension in global financial markets. The index is built on 33 financial market variables and is positive when stress levels are above average and negative if no financial market tensions are recorded.

The value of OFR FSI on a given day is the weighted average level of each variable observed on the market on that day. The index is zero when this average is zero, which suggests that the stress is at a normal level. The index is calculated after each US trading day.

Volatility, followed by credit risk[23], had the most significant rise in February and March, continued to remain high in the following months, and has fallen sharply since July. The FSI index shows the US as the region with the highest potential for economic instability among the three groups of

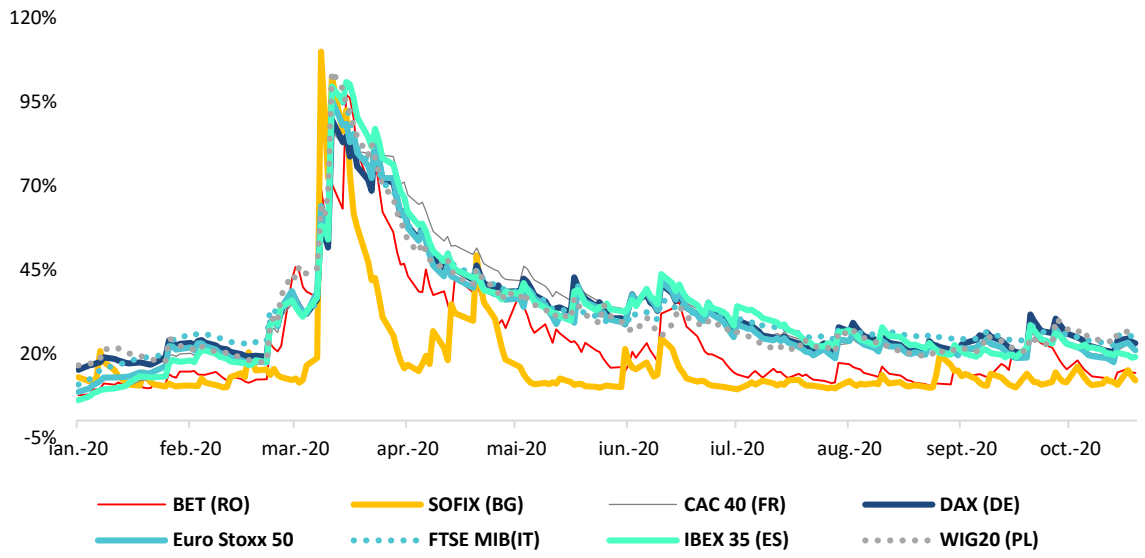
[21] https://www.nber.org/news/business-cycle-dating-committee-announcement-june-8-2020. „A recession is a significant decline in economic activity spread across the economy, normally visible in production, employment, and other indicators. A recession begins when the economy reaches a peak of economic activity and ends when the economy reaches its trough. Between trough and peak, the economy is in an expansion.... The committee recognizes that the pandemic and the public health response have resulted in a downturn with different characteristics and dynamics than prior recessions. Nonetheless, it concluded that the unprecedented magnitude of the decline in employment and production, and its broad reach across the entire economy, warrants the designation of this episode as a recession, even if it turns out to be briefer than earlier contractions."

22 https://www.financialresearch.gov/

23 Contains measures of credit spreads, which represent the difference in borrowing costs for firms of different creditworthiness. In times of stress, credit spreads may widen when default risk increases or credit market functioning is disrupted. Wider spreads may indicate that investors are less willing to hold debt, increasing costs for borrowers to get funding.

economies. In the second quarter, economic stability increased for the United States, for other advanced economies (mainly the euro area and Japan), and emerging markets.

Figure 23 Evolution of the volatility of the main European stock market indices

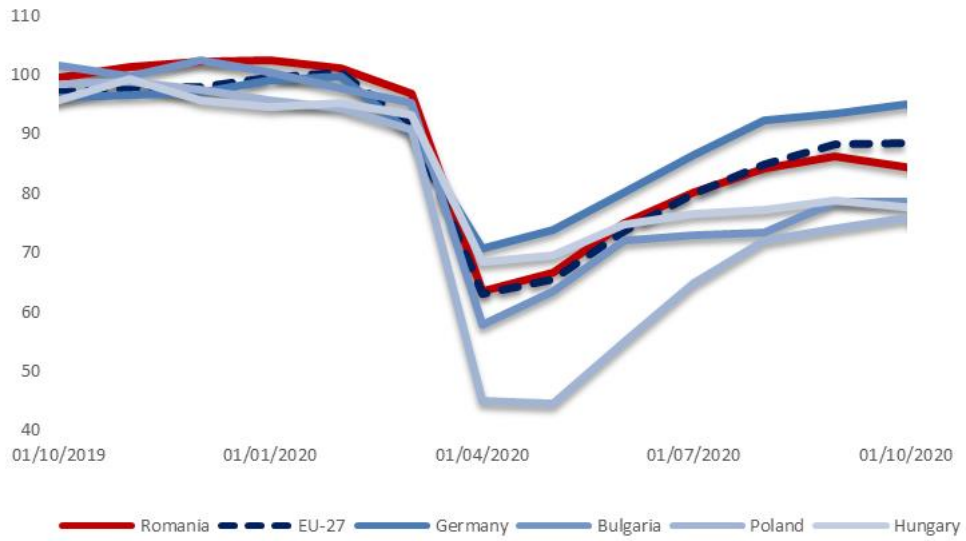


Source:Refinitiv, FSA calculations

EU capital markets were characterized by high volatility in the first part of 2020, as a result of the outbreak of the COVID-19 pandemic, demonstrating uncertainty over financial markets. The volatility of the Romanian capital market has followed the trend of the other European stock exchanges.

Thus, the first two quarters were marked by an increase in volatility on the international financial markets, more severely in March and April, the Romanian stock market following the same evolution. August, September, and October show moderate volatility, being higher than the level before the COVID-19 pandemic broke out.

Figure 24 EU Economic Sentiment Indicator (2019 = 100)



Source: Eurostat, FSA calculations

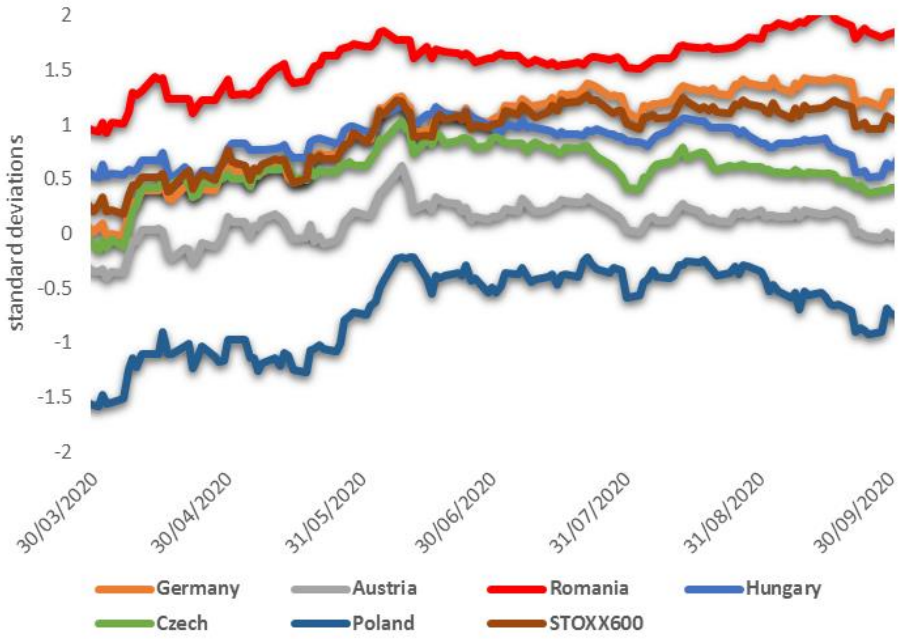
The indicators calculated by the European Commission for the degree of confidence in the economy reversed their trend in May, after experiencing the most significant declines in March and April. **Between June and September, all economic sentiment indicators began to rise**.

Despite the heterogeneity between markets, the spillover has spread rapidly to both emerging markets and other advanced economies, exceeding the speed by which capital markets have responded to financial market stress over the past 10 years.

The evolution of stock indices in the United States, Germany, Austria, Romania, Hungary, the Czech Republic, Poland, and Stoxx600 is normalized (average zero, standard deviation = 1) and presented in the following graph.

Capital markets rose slightly towards the end of the second quarter and in the third quarter and began to decline in October as a result of the re-imposition of social distance measures and the return of the economic activity reduction expectations.

Figure 25 Short-term evolution – the extension of the spillover evolution of indices (standard deviation)



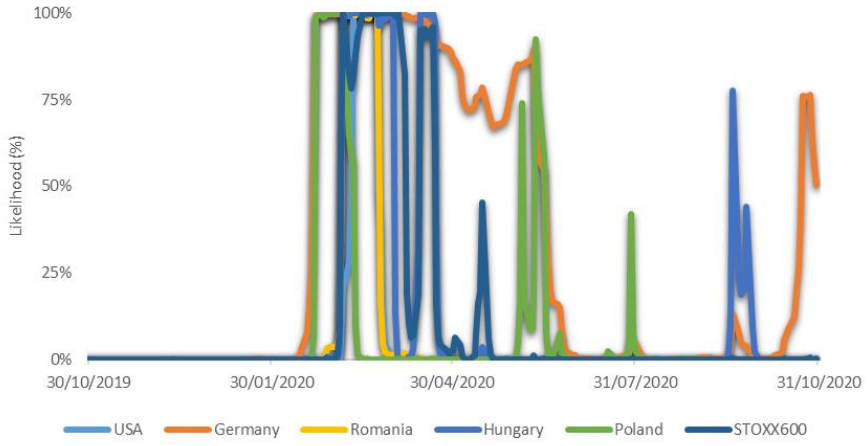
Source: Refinitiv, FSA calculations

On February 21, the US market entered the high volatility regime followed by Germany. The Romanian market entered the high volatility regime on March 5, being the last market (in the sample) affected by volatility, which shows a lower sensitivity to external events.

With the help of a Markov-Switching model, the volatility of stock indices was broken down into three volatility regimes: a low volatility regime, a medium regime and a high volatility regime.

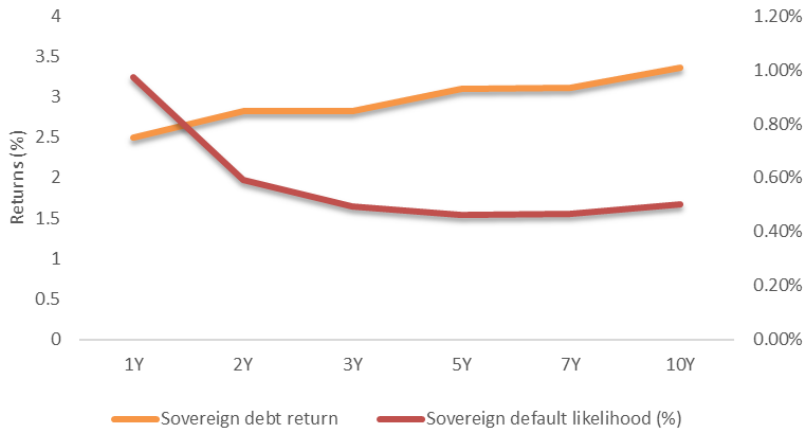
The high volatility regime occurs with a low frequency and is present when volatility rises dramatically. The analysis of the high volatility regime indicates that in March and April the spillover was strong for international stock indices. In the following months, volatility fell, except for the German market, which in October registered a rapid drop in the stock market index.

Figure 26 Extension of spillover: high volatility regime (Markov-Switching model)



Source: Refinitiv, FSA calculations

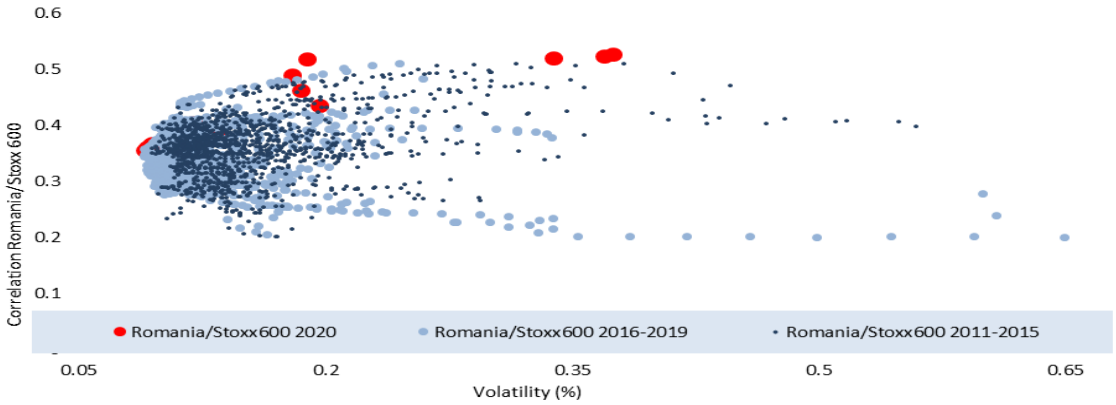
Figure 27 Sovereign default probability (Romania; Oct.2020)



Source: Starmine, Refinitiv, FSA calculations

In March, the default risk for short-term sovereign debt rose and not only for Romania, but also for other European economies, as a result of the rapid deterioration of the economic climate and forecasts of reduced economic activity. In the next two quarters, the default probability dropped for all maturities.

Figure 28 Rise of the risk of correlation with foreign markets - the dependence between the Romania / Stoxx 600 correlation and the volatility of the Romanian capital market



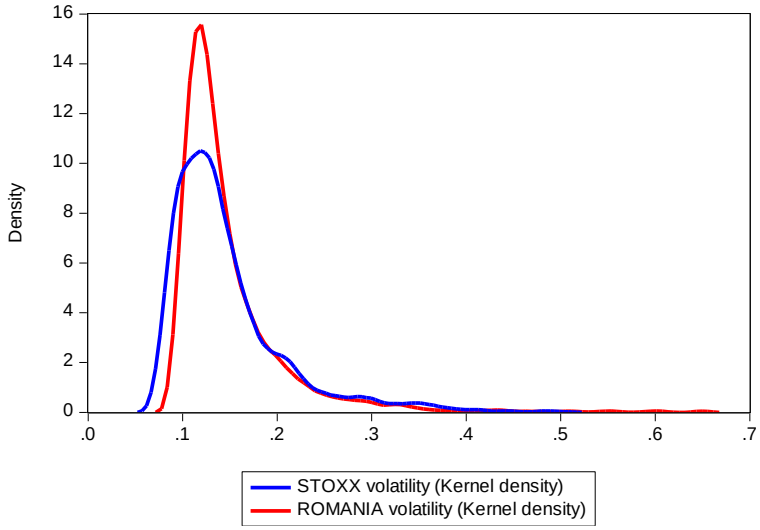
Source: Refinitiv, FSA calculations

The dependence between volatility and correlation is a property specific to financial markets defined also with the term of spillover.

The density for the periods 2011-2015 and 2016-2019 is concentrated in the medial left area, which indicates that in the normal market regime, volatility is expected to be up to 20% with a significant correlation in the range of 0.3-0.4.

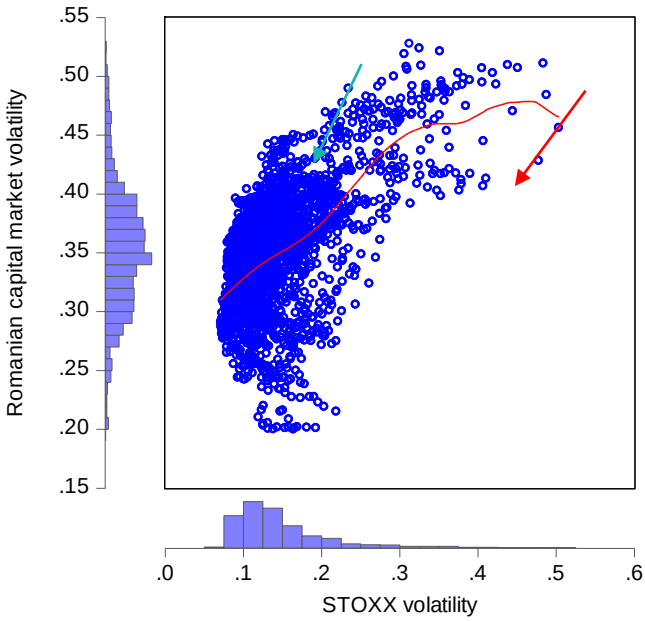
In the first quarter of 2020, the dependence between volatility and correlation rose rapidly. At a volatility of over 50%, the correlation between markets increased over 0.5. A high level of correlation is normally expected only for markets with similar assets. In the second and third quarters the correlation with the STOXX600 index dropped to 0.3.

Figure 29 Volatility density for Romania and Stoxx600. Quantile dependence



Source: Refinitiv, FSA calculations

Figure 30 Relationship between Stoxx600 index volatility and the Romanian capital market: 3-spillover scenarios between the European market and the local capital market



The density of co-dependence in the period 2011-2020 between the volatility of the Romanian capital market index and the STOX600 index shows that volatility is usually 85% in the range [0 0.2).

Because the assets valued on the two markets are heterogeneous, the financial shocks of the last 10 years have had 3 different evolutions:

1) low volatility in external markets with high volatility for the domestic market (blue arrow),

2) high volatility for both markets,

3) high volatility for external markets, low volatility for the domestic market. **COVID-19 is scenario 2 indicated by the red arrow.**

Source: Refinitiv, FSA calculations

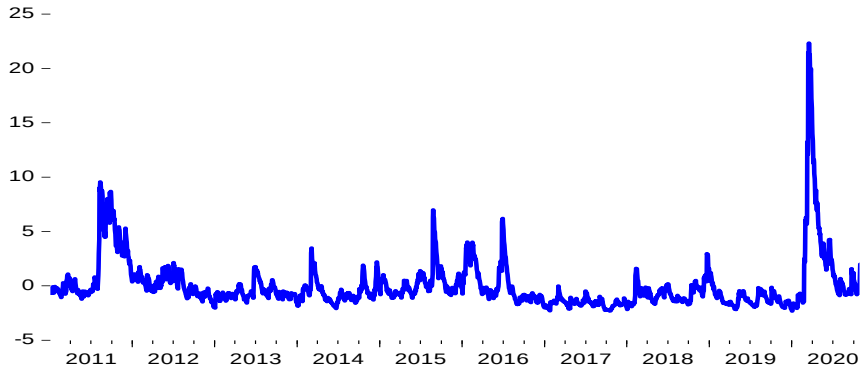
The 3 volatility scenarios in which volatility exceeds the value of 20% are the expression of only 2% of the data. The results should be understood as a function of external market volatility, as the volatility of the Stoxx600 causes the Granger local stock market and not the other way around.

Regarding the evolution of volatility in the markets of Hungary, Poland, Austria, Czech Republic, Germany, and Stoxx600, the principal component analysis (PCA) shows that they are co-dependent with the volatility on the Romanian capital market in a proportion of 83% (the first component extracted).

The following graph shows the evolution of the common factor for capital market volatility in Romania, Hungary, Poland, Austria, the Czech Republic, Germany, and Stoxx600. Tension rose in March to a level close to the events of 2011, 2015 and 2016.

In the second and third quarters, volatility, explained by the common factor for the analyzed markets, dropped significantly. The common factor was estimated with data between January 2011 and October 2020.

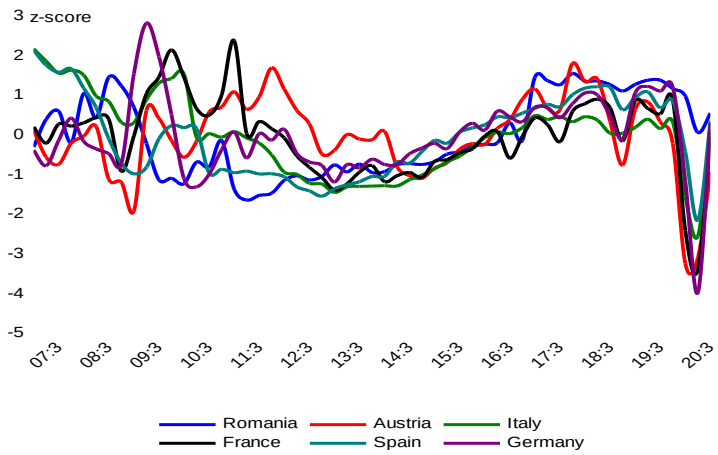
Figure 31 Common factor for the dynamics of capital market volatilities



Source: Refinitiv, FSA calculations

The slowdown in the global and European economy will also have a strong impact on the automotive sector, as trends in all European economies show a decline in the number of newly car registrations. The number of new registered cars fell more in Austria, Italy, France, Spain and Germany than in Romania.

Figure 32 New car registrations (2007-2020 third quarter; z-score)

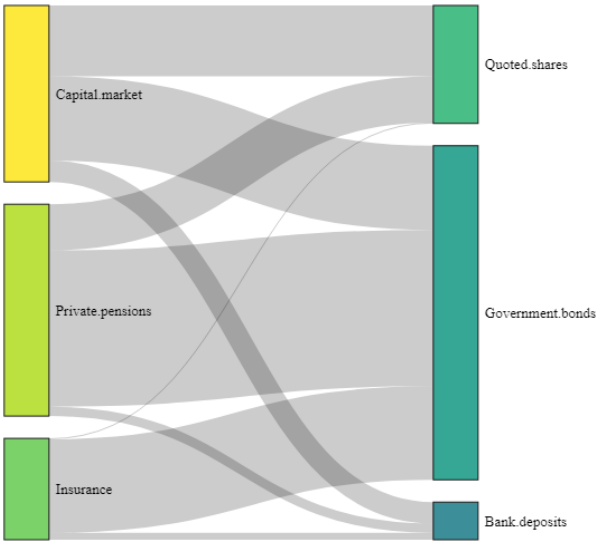


Source: Refinitiv, FSA calculations

3.3. Network of inter-sector balance sheet exposures

One of the already traditional methods used to monitor the level of interconnection between markets is the analysis of balance sheet exposures between sectors or between individual entities. In particular, for entities operating in non-bank financial markets, mostly institutional investors, exposure to several main asset classes and the markets in which they are traded is relevant: government securities, bank deposits or shares.

Figure 33 Network of exposures of entities in non-bank financial markets by types of assets as of June 30, 2020



Source: FSA, FSA calculations

The capital market, represented by open and closed-end investment funds, Fondul Proprietatea and financial investment companies, holds a share of about 30% in listed shares as of June 30, 2020. At the same time, private pensions (privately managed pension funds and voluntary pension funds) hold in the investment portfolio a percentage of approximately 19% in listed shares. The insurance market, composed of insurance companies active on June 30, 2020, invested 0.4% in listed shares. We estimate that the interconnection of the entities supervised by FSA with the stock markets has a medium to small scale.

The specifics of the activity of insurers, investment and pension funds, signify that the financial assets held have an extremely important role in their ability to comply with their obligations towards policyholders/investors/participants. At the same time, a shock felt by one of the issuers of such instruments or by one of the markets in which they are traded, with a significant share in aggregate assets at the level of one of the non-bank financial sectors supervised by FSA, could implicitly impact the performance or stability of that sector.

The largest exposure to the banking sector is held by collective investment undertakings, which hold a 9% share in bank deposits, while private pension funds and insurance companies hold shares of 4% and 3% in bank deposits, respectively. The level of interconnection with the banking system (in terms of balance sheet assets) is low.

The network of exposures of the entities from the non-bank financial markets shows that, in the case of all the three non-bank financial sectors supervised by FSA, the main risk exposure is towards the Romanian state, through the sovereign bonds held in the portfolio. Thus, government securities are held in the investment portfolios of collective investment undertakings in a percentage of about 22%, in a percentage of 66% are found in the investment structure of private pension funds, and insurance companies have invested 39% of their assets in government securities.

3.4. Spillover index for sovereign bonds

The spillover index for government bonds assesses the extent to which shocks in domestic markets affect other countries, but also the evolution of the intensity of contagion phenomena by comparison with previous values of the index (Diebold, 2009).

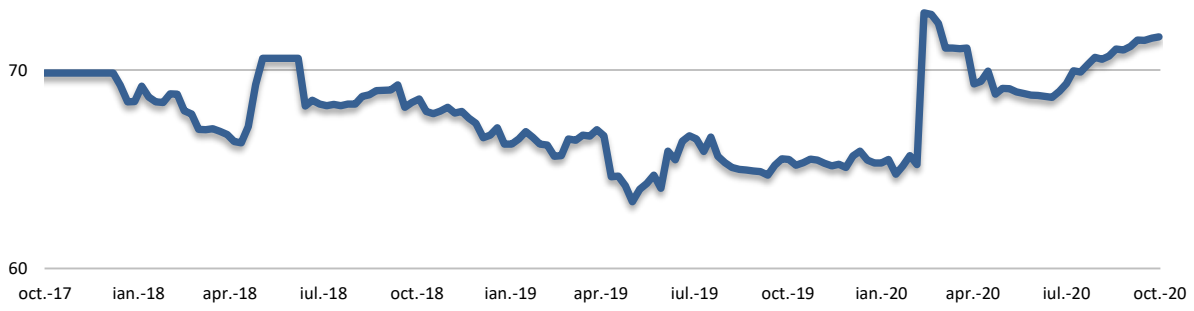
The calculation of the index is based on a VAR model (2) for a mobile sample of 150 weekly yields of bonds denominated in euro (lei for Romania: 10 years maturity), starting with 2007 to capture the evolution of the index about the value recorded during the sovereign debt crisis of 2011. Bonds issued by Germany are used as a benchmark for calculating the bond spread.

Initially, the highest values of the spillover index were reached during the sovereign debt crisis (2011) and in March 2012 (Greece's second bailout). The worsening of market conditions, which arose as a result of the uncertainties generated by Grexit and later by Brexit (2018), increased the spillover on the sovereign credit markets.

In the sovereign bond market, the contagion between government bond yields rose sharply and intensified in the first quarter of 2020, in February and March, surpassing in speed the previous episodes of contagion spreading between European economies.

The spillover index for government bonds increased simultaneously with the spillover index for the capital market, as a result of the risk aversion of investors who left the stock markets and bought government bonds, but also in the context of the measures taken by the European Central Bank for market liquidity growth.

Figure 34 Spillover index for government bonds (10 years)



Source: Refinitiv, FSA calculations

Factors influencing the price of sovereign bonds are global risk aversion, spillover and country-specific risk. Growth in February and March was predominantly influenced by global risk aversion.

Net spillover is the difference between received spillover and transmitted spillover and is an indicator of their relative importance to the sovereign bond market.

The table below shows that Bulgaria, Romania and Hungary receive net spillover, while Spain, Italy, Belgium, France and Ireland transmit net spillover. Romania receives 45% spillover on average. Italy is the country that transmits the highest spillover because it is the third-largest economy in the world in terms of bond market size.

The spillover indicates sensitivity to changes in the yields of other indices studied and thus shows the degree of long-term integration, but also short-term sensitivity to the movements of other capital markets.

Table 10 Spillover received and transmitted in government bond yields (10 years)

	RO	IT	SP	AU	FR	NL	PT	IR	FN	BE	BL	HN	CZ	PO
RO	27.8	4.5	4.6	5.4	8.3	3.6	2.4	2.9	9.8	9	1.4	8.8	8.2	3.5
IT	0.3	31.9	12.1	3.6	6.7	2.2	10.1	9.1	3.6	9	2.5	6.1	0.4	2.4
SP	0.8	10.2	22.6	4.3	9.4	4.3	12	9	5.2	11.1	1	5.8	0.9	3.4
AU	2.3	4.3	3.9	31.2	9	8.9	4.3	3.8	11.3	14.2	1.2	3.7	1.1	0.8
FR	1.2	6.6	6.6	6.5	25.2	7.6	5.9	9	9.4	14.7	1.7	4	0.8	0.8
NL	2.8	3.1	5.3	12	7.8	28.8	4.6	5	8.5	14.5	0.5	5.6	0.2	1.4
PT	0.5	8.8	10.3	4.9	5.3	5.1	33.5	8.6	3.9	7.1	0.8	5.4	0.6	5.3
IR	0.3	8.3	9.9	2.6	9.5	5.1	8.1	32.4	5.4	10.5	0.7	4.6	0.3	2.5
FN	2.6	3.5	6.7	8.7	8.1	5.1	2.6	5.2	31.3	11.5	1.4	7.3	2.4	3.5
BE	1.4	6.7	7.5	5.8	13.3	6.4	7.2	11.5	9.4	22.1	1.6	4.8	0.4	1.7
BL	0.5	1.3	3.2	7.5	0.3	2	4.5	1.1	2	1.5	70.3	2.3	2.2	1.3
HN	2.2	2.1	1.8	2.5	3.8	2	4	5.6	2.3	5.1	0.8	56.1	2.4	9.2
CZ	10.6	2.6	2.7	1.6	2.8	1.8	1.2	0.6	2.9	1.9	5.2	4.5	57.2	4.4
PO	1.7	2.7	2.7	1.4	1.8	1.2	3.2	0.8	3.7	1.3	3.8	7.7	3.7	64.3

Source: Refinitiv, FSA calculations

3.5. Composite index of the dynamic of non-bank financial markets

Due to the mutual exposure between them, facilitated by the financial instruments held in the investment portfolios, there are common risk factors that influence the dynamic of non-bank financial markets.

Although a possible financial shock may affect all three sectors at the same time, its impact can be measured with different frequencies and with a certain gap. Some of the supervisory data for the capital markets and pension funds are available on a daily, weekly, or monthly basis, usually with a gap of one period, and for the insurance sector the data are available every quarter, with a gap of two months.

A mixed frequency indicator is designed to integrate and extract information from the time series available at different periods: daily, monthly, quarterly, etc., and to provide a trend signal for a heterogeneous data set with an unclear trend[24].

[24] Acatrinei, M., 2020. Financial stability indicator for non-bank financial markets. Journal of Financial Studies, vol V, no.9, November 2020

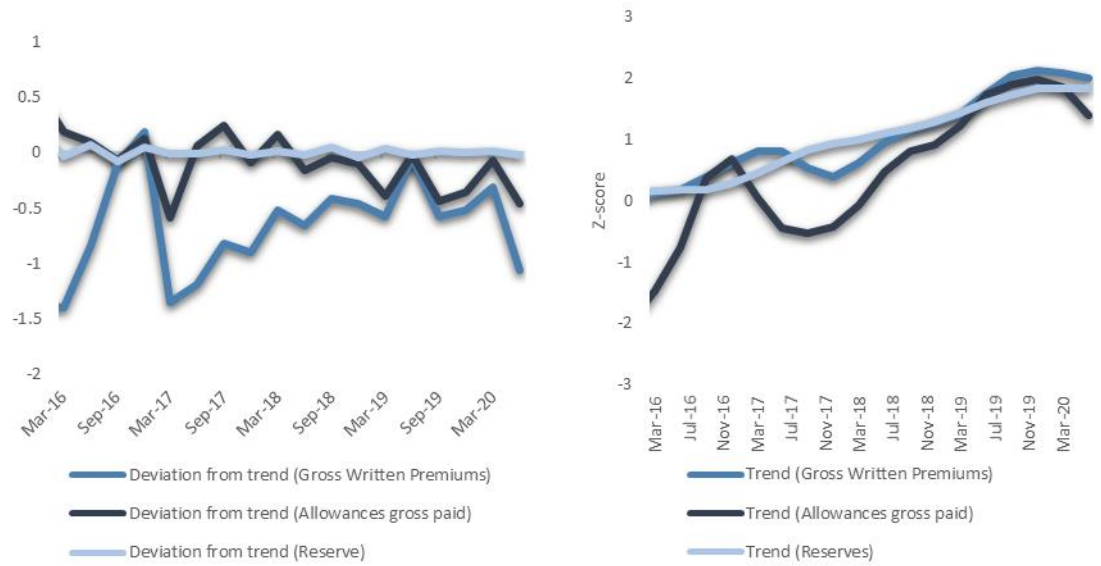
Shocks in financial markets, as well as events that can lead to rapid changes in the macroeconomic environment, can significantly influence financial intermediation both by contagion and by increasing stress on the portfolio of institutional investors.

The stability indicator for non-bank financial markets is built as an estimated monthly indicator from mixed frequency data. The purpose of the indicator is to signal the financial instability in non-bank financial markets. The mixed indicator built for non-bank financial markets [1] is constituted of the following time series:

- data regarding the monthly profitability of the Romanian capital market index calculated by Refinitiv were used for the capital market. We have chosen an index calculated by Refinitiv to ensure comparability with similar indices calculated for European economies;
- for the private pension sector, we calculated the average monthly yield for the private pension administrators from Pillar II. The data were available on the website of the Romanian Financial Supervisory Authority [2];
- for the data of the insurance sector, we selected the damage indicator which represents the ratio between the total losses (paid and reserved) in receivables plus the adjustment expenses divided by the total premiums collected. Insurance data are reported every quarter and should inform whether the insurance companies deal with a general loss. Quarterly insurance data were deseasonalized using the X-13 method;
- Robor monthly data series (3 months);
- for the sentiment index for the Romanian economy, the deseasonalized data available on the Eurostat website were used[3].

All data (pensions, capital market, insurance, economic sentiment index, interest rate) are expressed as z-score (mean 0 and standard deviation 1).

Figure 35 Trend deviations of insurance sector indicators (left), trend (right)

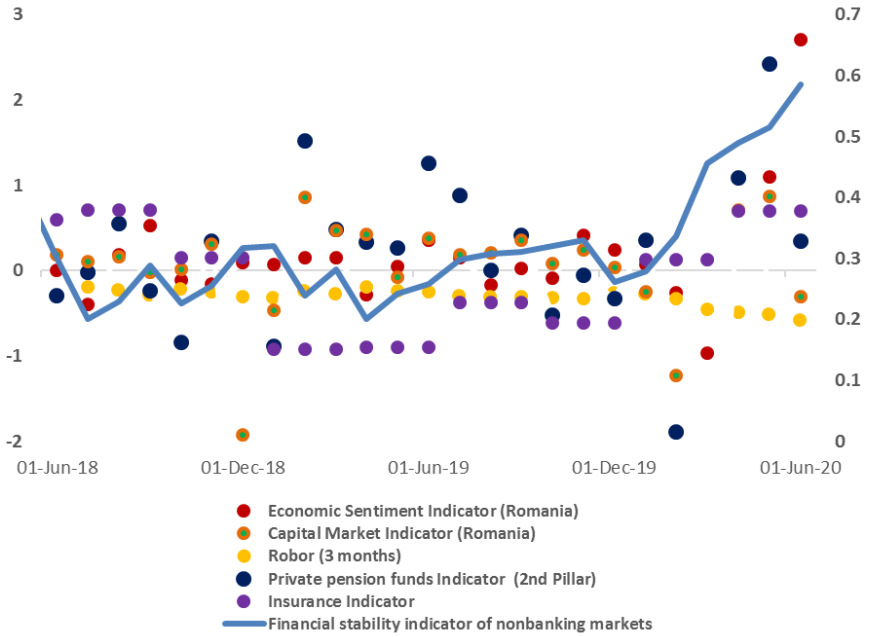


Source: Refinitiv, FSA, FSA calculations

The analysis indicates an upward trend in gross written premiums (PBS), gross indemnities paid and reserves over the last 4 years (2016-2020) with a deterioration in the first two quarters of 2020. Deviations from the trend are negative and show that economic shocks for gross written premiums

and gross written indemnities were negative and suggest that the insurance market is a market lower than potential with negative shocks stronger in the first two quarters of the year.

Figure 36 Financial stability indicator for non-bank financial markets (Jan. 2018-Jun. 2020)



Source: Refinitiv, FSA, FSA calculations

The financial stability indicator has been estimated at a monthly frequency and is useful for studying the current evolution of non-bank financial intermediation by taking into account the dependence between the three sectors. The indicator rose in the first two quarters of 2020 indicates a deterioration in financial stability.

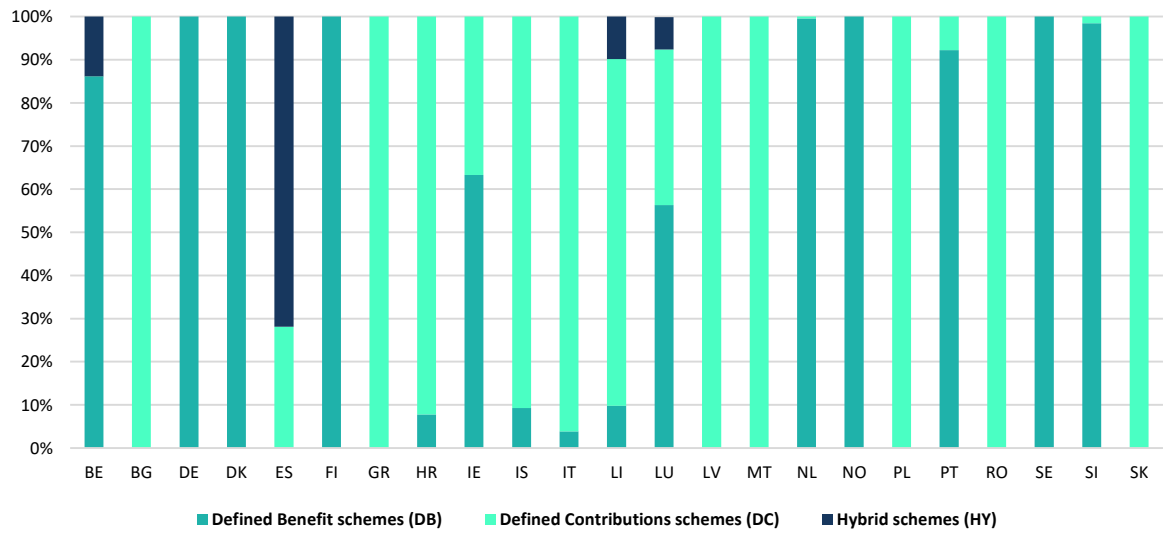
4. Stability of the private pension market

The private pension market has evolved positively since its beginning, regardless of the episodes of volatility encountered over the years. Thus, on September 30, 2020, the total value of private pension fund assets (Pillar II and Pillar III) reached the level of Lei 72.58 billion (EUR 14.90 billion). Private pension funds, with mainly local and regional exposure, succeeded in effectively passing through the health crisis, so that at the end of the third quarter of 2020 they recorded rates of return above the level reached at the beginning of the year. On the other hand, in the context of unfolding an instable legislative framework applicable to the private pension system, the risk of profitability is expected to remain at a medium level.

4.1. The European private pension market

Pension systems are heterogeneous in European countries: in general, Central and Eastern countries rely on defined contribution (DC) schemes, while Western countries rely on defined benefit (DB) schemes, with only four states opting also for hybrid schemes (Belgium, Spain, Liechtenstein and Luxembourg). Currently, the private pension system in Romania is composed of Pillar II (privately managed pensions) and Pillar III (voluntary pensions), both of the defined contribution (DC) type. Although a fourth pension pillar was established in Romania this year, namely the occupational pension system (DC), no occupational pension funds have yet been established.

Figure 37 Distribution of pension funds by type of scheme in 2018 (% of total assets)



Source: EIOPA

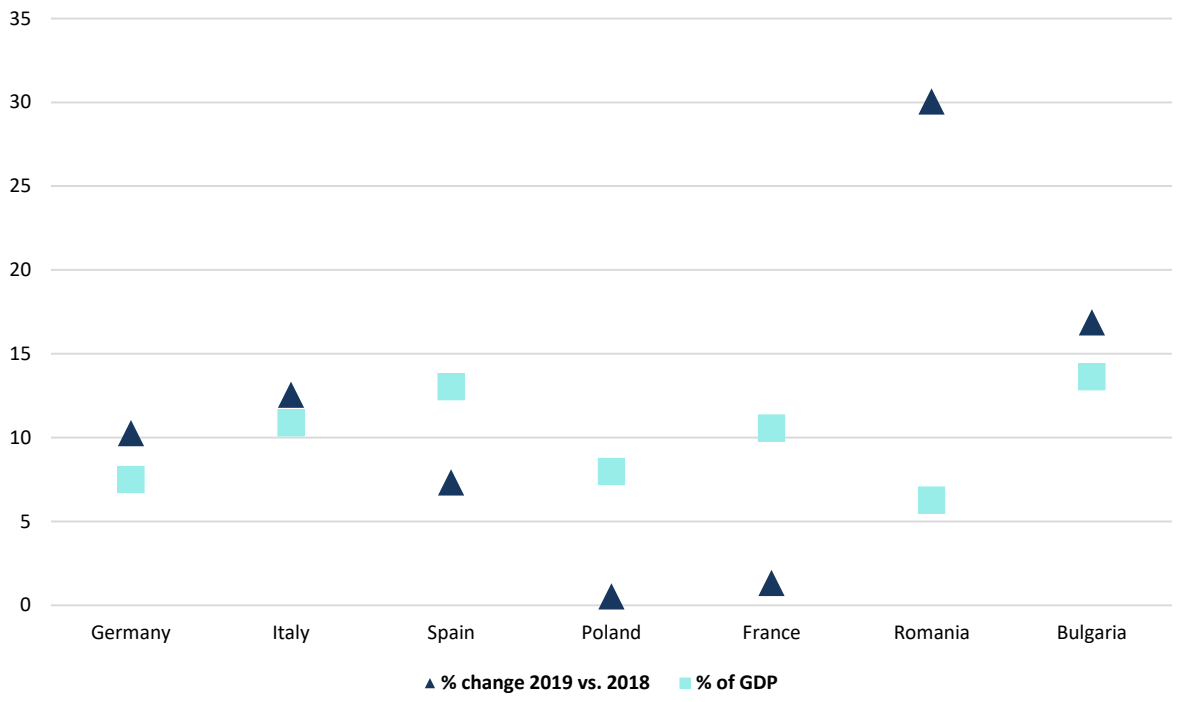
The latest comparable data at European level show that pension funds are constantly evolving, with the highest growth rate of EU pension fund assets being recorded by Romania (30% rise of assets in 2019 compared to the previous year). In terms of size, in light of the value of pension fund assets, the Netherlands has the highest value of $ 1.75 trillion, while Germany has over $ 285 billion25.

[25] OECD, Pension Funds In Figures 2020

The assets of private pension funds rose in all EU Member States in 2019 compared to 2018, with the lowest growth rate being in Poland, whose assets increased by only 0.5%, most likely as a result of the gradual transfers of members' assets before retirement to the Social Insurance Institute, in the context of the partial reversal of the private pension reform implemented by the Polish government in 2014.

In some countries there are other types of investment, such as individual pension insurance contracts and other vehicles offered and managed by banks or investment companies, in addition to private pension funds, to allow the population to accumulate savings for the retirement period (France, Sweden, Germany, Austria, Denmark, etc.). According to OECD data, combining the assets of private pension funds with those of other means of investment, it can be noted that Denmark has a share of about 220% of GDP.

Figure 38 Pension fund assets in European countries, % of GDP, 2019

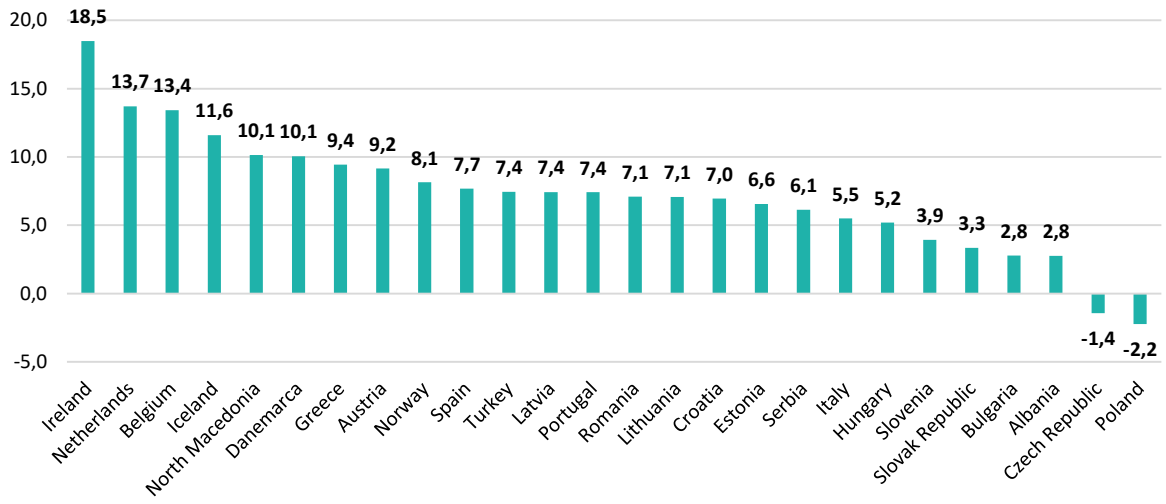


Source: OECD

Most European countries for which information is available, obtained real investment rates of return of over 5% in 2019. Pension funds in Romania recorded a real return of 7.1% according to statistics published by the OECD, and Ireland recorded the highest level, 18.5%.

Most likely, the high investment performance is due to the correlation of the capital market with the private pension market, the main stock market indices having a positive evolution at the end of 2019 compared to 2018. Pension funds in the Czech Republic and Poland obtained negative real investment rates of return of -1.4% and -2.2%, respectively.

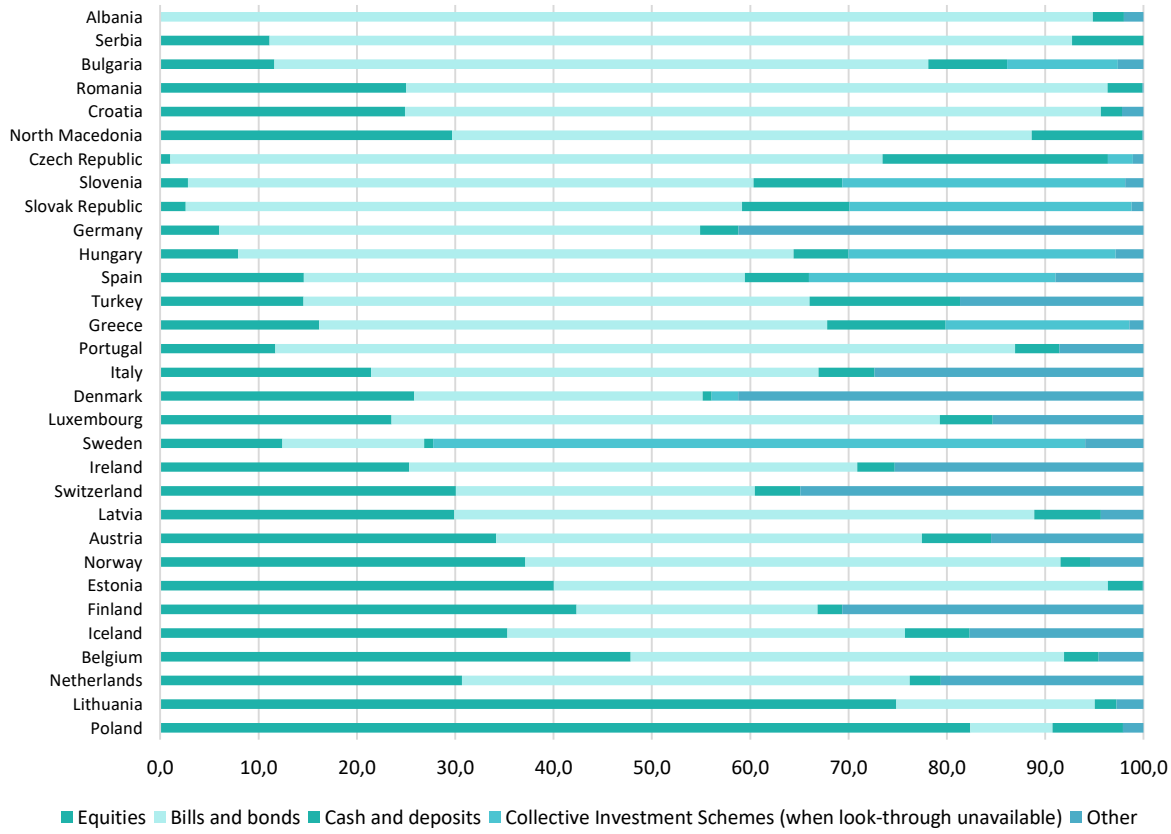
Figure 39 Investments Rate of Return in European countries, Dec. 2018-Dec. 2019 (%)



Source: OECD

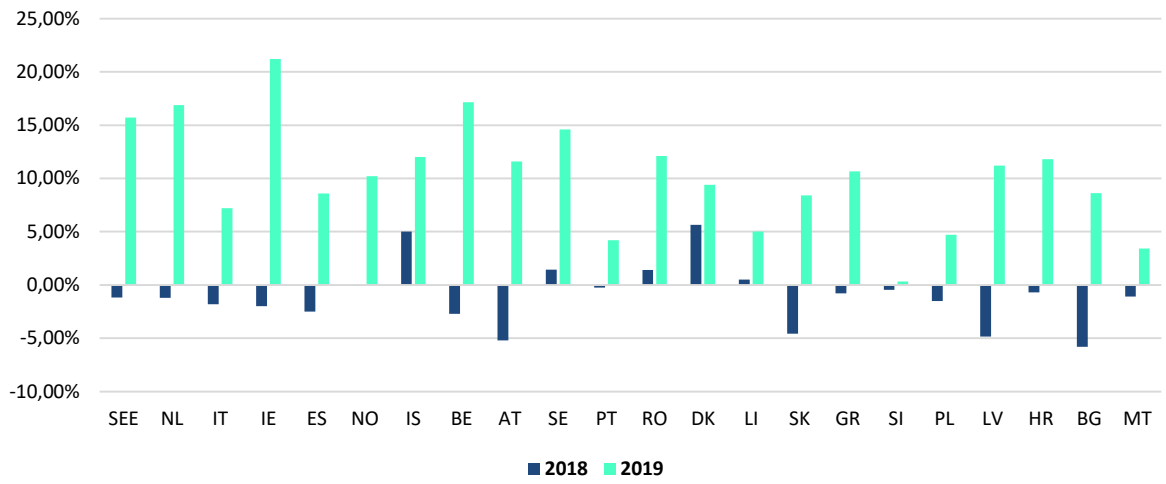
Private pension funds in European countries have invested mostly in bonds and equity, with a higher share in bonds. Poland and Lithuania have invested more than half of their assets in equity. Taking into account the portfolio structure of pension funds, any shocks in the equity or bond market will affect the investment performance of pension funds.

Figure 40 Investment structure of pension funds in European countries in 2019 (%)



Source: OECD, preliminary data, included both direct investments in stock, bills or bonds and cash or deposits, as well as indirect investments through mutual funds, where data on mutual fund investments were available.

Figure 41 Rate of return on assets in 2019 (%)



Source: EIOPA, preliminary data

Due to the favorable evolution of the financial market, the private pension markets' rate of return on assets calculated for the countries of the European Economic Area (EEA) has improved significantly in 2019 compared to the previous year. While most states recorded in 2018 negative returns on assets, Romania recorded a level of 1.40%.

The favorable macroeconomic environment in 2019 is currently impacted by the COVID-19 pandemic. Thus, most states that have heavily invested in financial assets such as stock or hold long-term instruments of considerable size may be affected by a potential deterioration in capital markets or a reduction in the risk-free interest rate.

4.2. Recent developments on the private pension market in Romania

In the context of an increasing demographic aging phenomenon, which puts increasing pressure on social safety net mechanisms, a fourth pension pillar has been established in Romania, namely the occupational pension system. At the beginning of 2020, the Parliament adopted *Law no. 1/2020 on occupational pensions*, which transposes the provisions of *EU Directive 2341/2016 on the activities and supervision of institutions for occupational retirement provision* (IORP II). The objective of this new system is to provide an **additional retirement saving**, financed mainly by employers and subsidiary by employees.

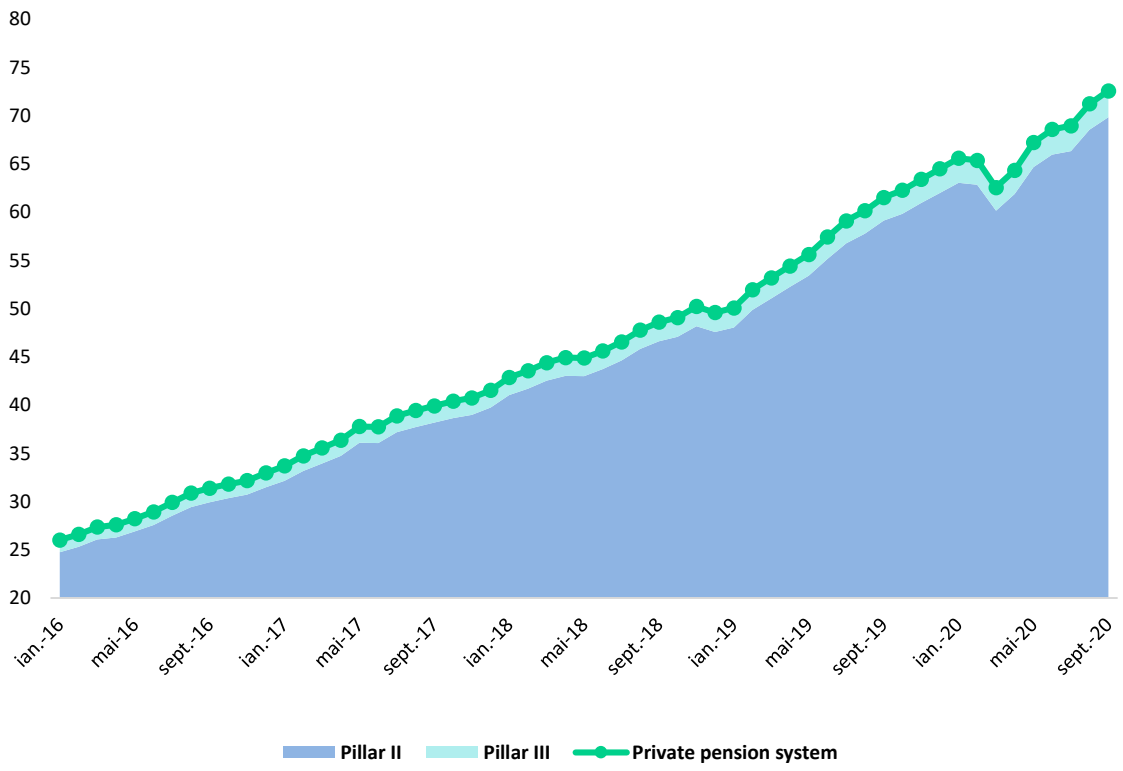
Occupational pension funds are based on a form of social partnership between the employer and his employees, being also a factor of stimulation and reward for employees, as well as a means for their retention. Thus, the employer is the one who proposes the pension scheme for all employees, within the collective labor agreement and also represents them in the relationship with the administrator, who establishes and administers the occupational pension fund, considering his legitimate interest as a contributor to the fund.

The Financial Supervisory Authority has drafted 11 rules, which regulate the establishment and functioning of the occupational pension funds, updating at the same time other rules that have an impact on the management activity of these funds. Until October 2020, no requests for the establishment of occupational pension funds were received, possibly also on the background of the events related to the COVID-19 pandemic.

The introduction of a new retirement savings component by the occupational pension will contribute to the development of a culture based on long-term savings and can ensure a flow of domestic capital to the economy through its investments. At the same time, the premises are created to ensure a replacement income as high as possible for future retirees, through the joint effort of employers and employees.

The evolution of the private pension system has been positive throughout its operation, the number of participants and the value of their personal assets increasing constantly. The value of the total assets under administration, at the level of the entire private pension system, reached at the end of September 2020 the amount of Lei 72.58 billion (EUR 14.90 billion), with a number of 8,104,786 participants.

Figure 42 Assets of the private pension system (billion lei)

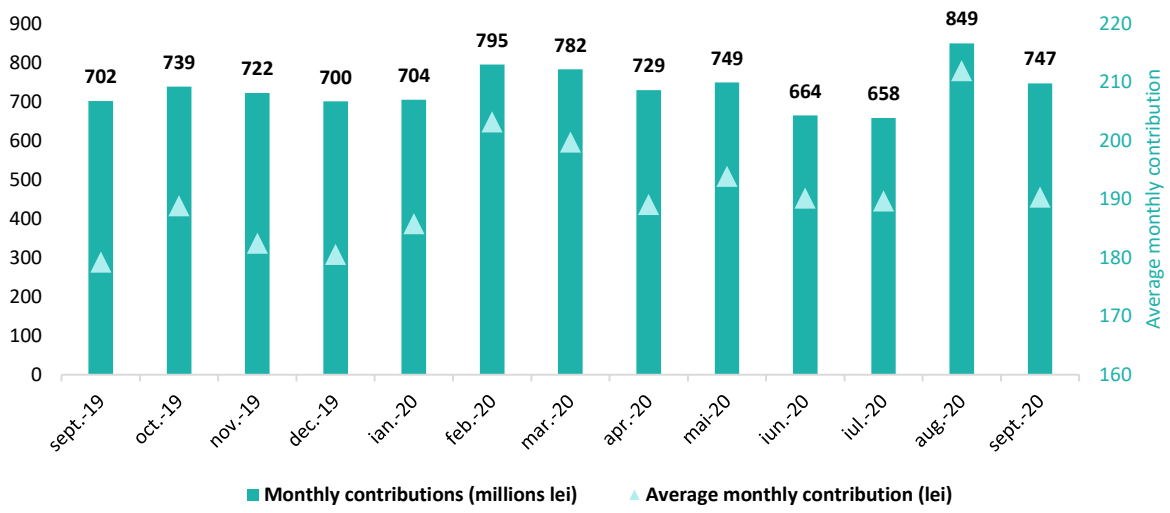


Source: FSA

The private pension market remained the most significant segment of the non-bank financial market supervised by the FSA in terms of asset value in the first half of 2020, holding 6.53% of GDP.

The significant and accelerated growth of pension fund assets during its operation was possible mainly due to the mandatory contributions to privately managed pension funds under Pillar II. These have increased over time as an aggregate effect of changes in contribution rates and as a result of the increase in the gross wages on which the respective rates have been calculated, retained and transferred. The contribution to a private pension fund does not represent additional financial obligations for participants, but is part of the individual contribution due to the public pension system. In September 2020, the share transferred was 3.75%. In other words, a percentage of 3.75% of the gross salary income goes to the privately administered pension.

Figure 43 Monthly evolution of contributions in Pillar II (million lei) and average contribution per participant (lei)

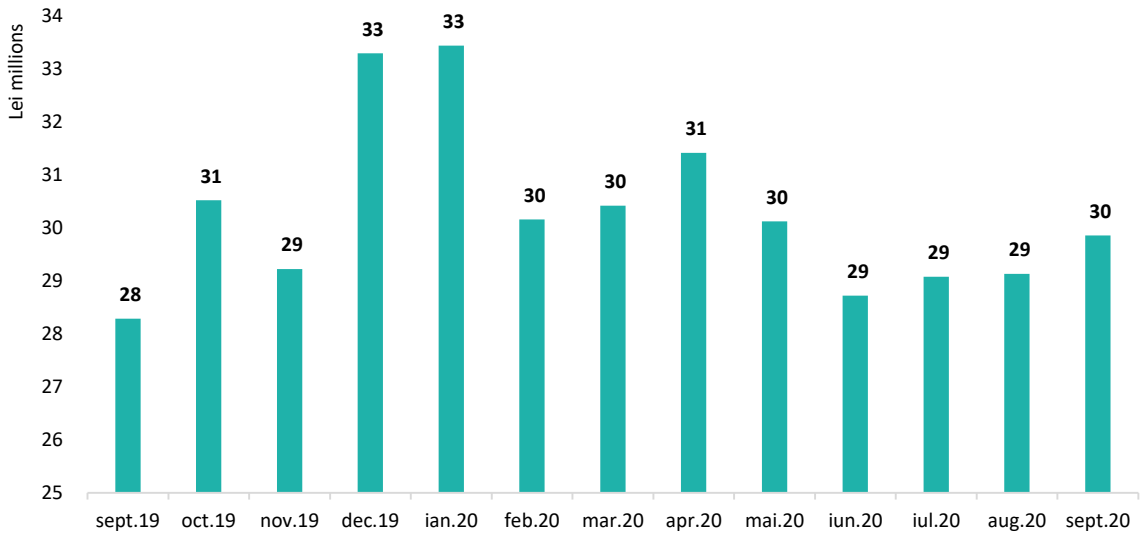


Source: FSA

There is a decrease in gross contributions in June and July 2020 (the reference months for which contributions are transferred being April and May) as a result of the increase in the number of individuals in technical unemployment according to the measures imposed by the establishment of the state of emergency in Romania.

The average contribution to private pension funds per participant registered the value of approximately Lei 190 on September 30, 2020, rising compared to the same month of the previous year.

Figure 44 Monthly value of contributions in Pillar III (million lei)



Source: FSA

In the case of Pillar III, related to voluntary pension funds, the evolution of contributions was positive, but on a much smaller scale and at a slower pace compared to private pension funds with mandatory contribution under Pillar II.

The risks related to pension funds, both for Pillar II and for Pillar III, remain at a very low level due to the diversification and quality of investments held by funds through investments in fixed income investments and to the adequate level of liquidity.

Table 11 Administrators and custodians of private pension funds as of September 30, 2020

Administrator	Depository	Pension Fund (PII)	Market share as of September 30, 2020
NN PENSII SOCIETATE DE ADMINISTRARE A UNUI FOND DE PENSII ADMINISTRAT PRIVAT SA	BRD - GROUPE SOCIETE GENERALE SA	NN Privately Managed Pension Fund	34.87%
ALLIANZ-ŢIRIAC PENSII PRIVATE SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	AZT VIITORUL TĂU Privately Managed Pension Fund	21.57%
METROPOLITAN LIFE SOCIETATE DE ADMINISTRARE A UNUI FOND DE PENSII ADMINISTRAT PRIVAT SA	UNICREDIT BANK S.A.	METROPOLITAN LIFE Privately Managed Pension Fund	14.03%
AEGON PENSII - SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	VITAL Privately Managed Pension Fund	9.99%
GENERALI SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	ARIPI Privately Managed Pension Fund	8.79%
BCR PENSII, SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	BCR Privately Managed Pension Fund	6.86%
BRD SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BANCA COMERCIALĂ ROMÂNĂ SA	BRD Privately Managed Pension Fund	3.89%

Administrator	Depository	Pension Fund (PIII)	Market share as of September 30, 2020
NN ASIGURĂRI DE VIAŢĂ SA	BRD - GROUPE SOCIETE GENERALE SA	NN OPTIM Voluntary Pension Fund	42.43%
BCR PENSII, SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	BCR PLUS Voluntary Pension Fund	18.02%
NN ASIGURĂRI DE VIAŢĂ SA	BRD - GROUPE SOCIETE GENERALE SA	NN ACTIV Voluntary Pension Fund	11.32%
ALLIANZ-ŢIRIAC PENSII PRIVATE SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	AZT MODERATO Voluntary Pension Fund	10.62%
BRD SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BANCA COMERCIALĂ ROMÂNĂ SA	BRD MEDIO Voluntary Pension Fund	5.38%
ALLIANZ-ŢIRIAC PENSII PRIVATE SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	AZT VIVACE Voluntary Pension Fund	3.93%
SAI RAIFFEISEN ASSET MANAGEMENT SA	BRD - GROUPE SOCIETE GENERALE SA	RAIFFEISEN ACUMULARE Voluntary Pension Fund	3.84%
BT PENSII - SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII FACULTATIVE S.A.	BRD - GROUPE SOCIETE GENERALE SA	PENSIA MEA Voluntary Pension Fund	3.16%
GENERALI SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	STABIL Voluntary Pension Fund	0.98%
AEGON PENSII - SOCIETATE DE ADMINISTRARE A FONDURILOR DE PENSII PRIVATE SA	BRD - GROUPE SOCIETE GENERALE SA	AEGON ESENŢIAL Voluntary Pension Fund	0.33%

Source: FSA

Participants' contributions to the private pension funds are transferred directly to the account of the pension fund registered with the depository bank, the latter being authorized, regulated, supervised and controlled by the National Bank of Romania. Therefore, the depositories along with the administrators of the pension funds are responsible for participants' assets.

The latest data on the pension funds market show that asset depository services are provided by three credit institutions authorized by the National Bank of Romania (BNR): BRD, which has the highest share of assets, of approximately 83%, Unicredit, 14%, and BCR, 4%.

The degree of concentration remains high in this market segment, both due to structural reasons related to the operating mechanisms of the system and its characteristics, as well as due to its evolution over time. The high level of concentration is the main concern from the perspective of monitoring operational risks for this market segment.

4.3. Fund investment structure

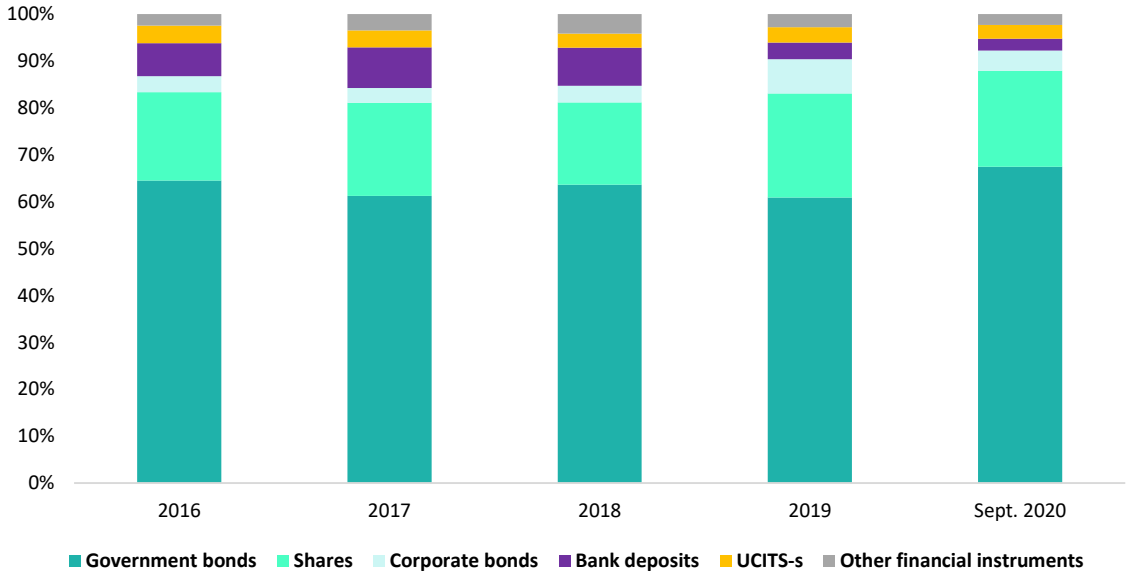
The private pension system in Romania has complied over time with the requirements of prudence, quality and security of portfolios so that participants' contributions will be safe. The investment policy aims at diversifying the portfolios of private pension funds, thus diminishing the market risk of an asset class, in a period in which the prices of other financial assets has fallen.

Pension funds invest in a mix of financial assets such as shares, corporate bonds, municipal bonds, supranational bonds, government securities, mutual funds and bank deposits.

The largest share in the portfolios of private pension funds was permanently held by fixed income financial instruments (especially government securities, followed by supranational, municipal and corporate bonds). Local pension funds benefited from the higher level of interest rates in Romania compared to Western European countries, from the perspective of significant bond holdings.

Even if in recent years the structure of investments has experienced a slight diversification, the share of fixed income instruments still exceeds 74% of the total.

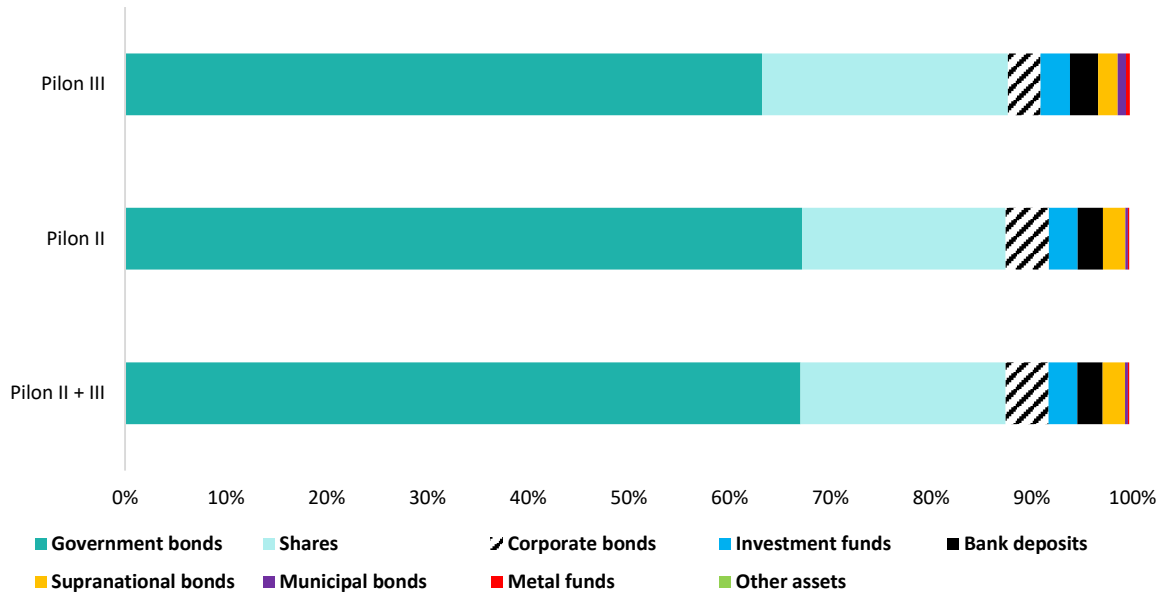
Figure 45 Evolution of the structure of pension fund asset investments (% of total assets)



Source: FSA

At the end of September, the pension funds' investments were generally made locally, in a percentage of 90%, being denominated in lei 89% of their financial assets. Most Romanian instruments are represented by government securities, shares listed on the Bucharest Stock Exchange and bank deposits. The generally higher level of yields on bonds denominated in lei compared to that of similar instruments issued in other currencies, corroborated with the predominantly positive performance of the local stock market led to private pension funds obtaining consistent and generally higher returns than inflation.

Figure 46 Figure 46 Structure of private pension funds' assets as of September 2020



Source: FSA

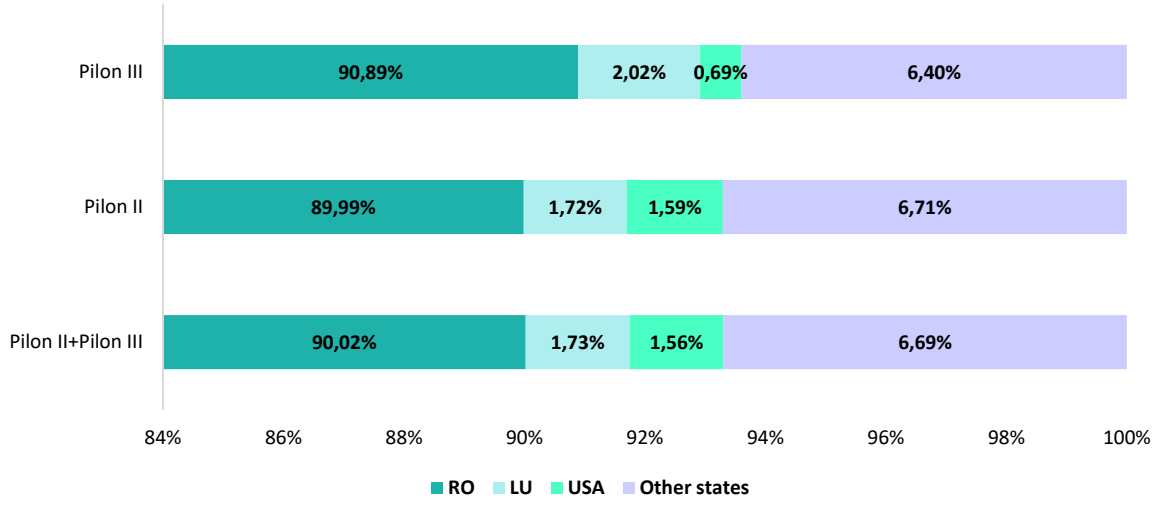
The structure of privately managed pension fund investments (Pillar II) remains mainly oriented towards government securities (68% at the end of September 2020). The second class of assets in the funds' portfolios is represented by investments in listed shares with a share of about 20%.

The share of government securities in the investment portfolio of voluntary pension funds (Pillar III) was about 64% at the end of September 2020, while the shares hold a share of 25% of their total assets.

Therefore, from an investment perspective, the main types of risks to which pension funds are exposed are credit risk and market risk:

- Credit risk is low due to the high quality of issuers of fixed income instruments held by funds, the large majority being sovereign bonds and bonds issued by international financial institutions. The share of deposits with credit institutions and corporate bonds (with investment rating) is about 7%, at the level of the entire private pension system. In order to minimize this risk, the financial creditworthiness of the issuer is analyzed at the moment of placing an investment, being then periodically monitored by the administrators.
- Market risk is mainly composed of interest rate risk, spread risk (the risk that the value of the bond investment will decrease due to the deterioration of the market's perception of the issuer's quality), the equity risk and foreign exchange risk. In turn, the equity risk is composed of systematic market risk and individual risk related to issuers whose shares are held in the portfolio.

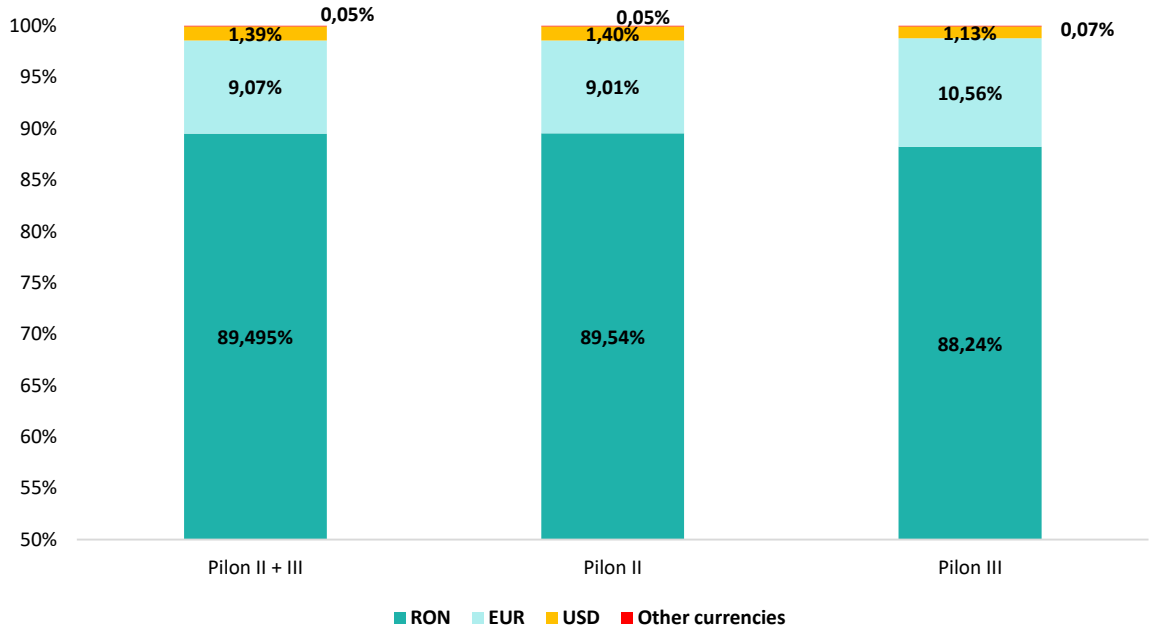
Figure 47 Exposure by country of private pension fund assets in September 2020



Source: FSA

On September 30, 2020, in light of the country of origin of the issuers of financial instruments held in the private pension funds' portfolios (Pillar II + Pillar III), a share of about 90% is related to the investments of some issuers in Romania.

Figure 48 Currency exposure of private pension fund assets in September 2020



Source: FSA

Given the limited exposure to financial instruments denominated in foreign currency (most of which is related to instruments denominated in EUR, approximately 9% at the aggregate level of the private pension system), the currency risk is very low as of 30 September 2020.

4.4. Fund units returns

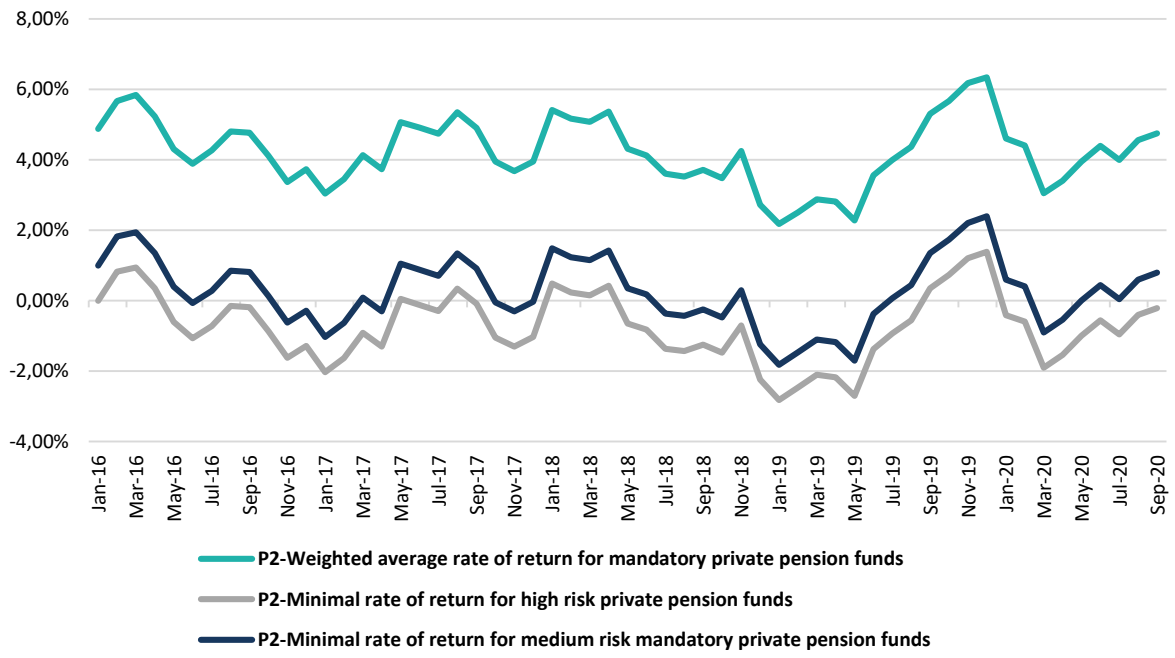
The main performance indicator of private pension funds, calculated according to the currently applicable legislation, is the weighted average rate of return of all private pension funds for the last 60 months. Its average for all privately managed pension funds, shown in the chart below, peaked in December 2019 (6.34%), followed by a downward trend caused by the COVID-19 pandemic. After this episode, the trend of the weighted average rate of return of privately managed pension funds returns to an upward trend, at the end of September 2020 registering 4.75%.

Both minimum rates of return have evolved on the same trend with the weighted average rate of return of all pension funds, being calculated accordingly. In the third quarter of 2020, the minimum rates of return of pension funds for each mentioned risk category registered values similar to those at the beginning of the year.

The minimum rate of return of all high-risk funds is calculated as the lower of the weighted average rate of return of all pension funds in the period less 5 percentage points and 40% of the weighted average rate of return of all pension funds during that period.

The minimum rate of return of all medium-risk funds is the lowest of the weighted average rate of return of all pension funds during the period, less 4 percentage points, and 50% of the weighted average rate of return of all pension funds during that period.

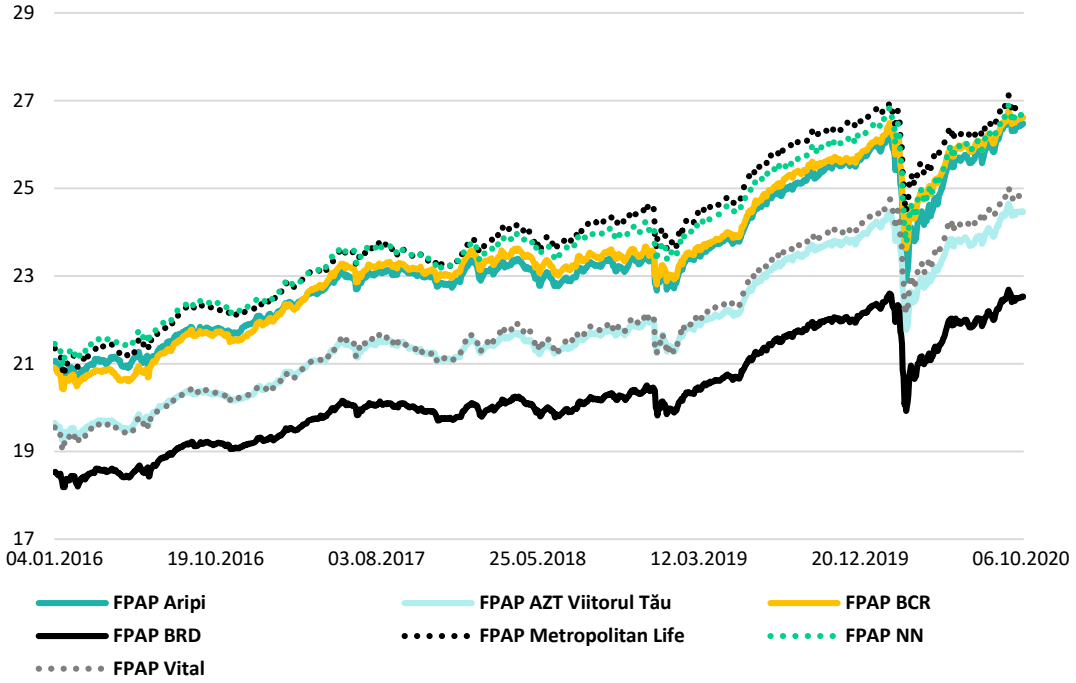
Figure 49 Evolution of profitability rates of privately managed pension funds



Source: FSA

The recent increase in financial market volatility also influences the evolution of fund unit values, but is mitigated by three very important factors: good diversification of stock and bond portfolios, short (average) duration of bond portfolios and the continuous and significant flow of net monthly contributions received by the funds.

Figure 50 Evolution of Unit Values of Net Assets in Pillar II Pension Funds (lei)



Source: FSA

In the long run, for the entire period of operation of private pension funds, their annualized return[26] remains high, as shown in the table below.

Table 12 Annualized return of VUAN in Pillar II from establishment to September 30, 2020

FPAP Aripi	FPAP AZT Viitorul Tău	FPAP BCR	FPAP BRD	FPAP Metropolitan Life	FPAP NN	FPAP Vital
8.00%	7.45%	8.04%	6.71%	8.21%	8.12%	7.50%

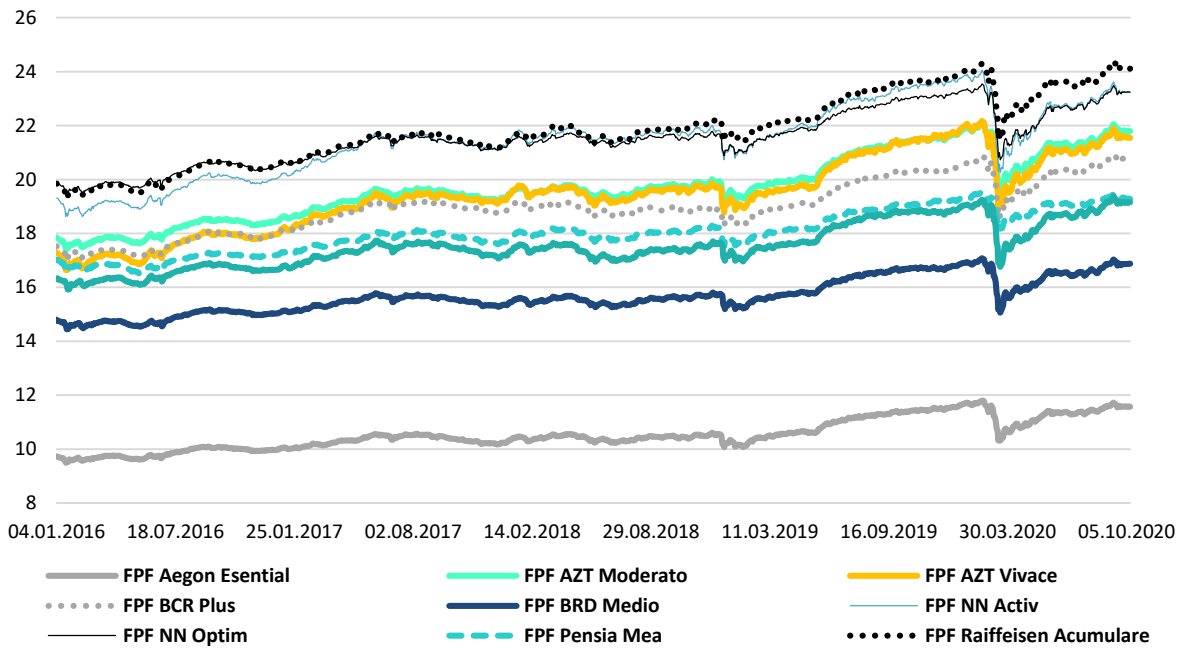
Source: FSA

Due to the similar investment structure, the evolution of fund unit returns related to Pillar III voluntary pension funds follows the same trend presented in Pillar II funds, noting that some funds were launched more recently and therefore the long-term performance history in their case is different.

In the short term, however, the evolution of returns is very close as a trend in the entire market of private pension funds.

[26] The annualized return is the average annual return calculated in the long run, from the establishment of the private pension system to present date

Figure 51 Evolution of Unit Values of Net Assets in Pillar III Pension Funds



Source: FSA

Table 13 Annualized return of VUAN in Pillar III from establishment to September 30, 2020

FPF Aegon Esential	FPF AZT Moderato	FPF AZT Vivace	FPF BCR Plus	FPF BRD Medio	FPF NN Activ	FPF NN Optim	FPF Pensia Mea	FPF Raiffeisen Acumulare	FPF Stabil
2.99%	5.96%	5.92%	5.57%	4.69%	6.44%	6.56%	4.99%	7.40%	5.76%

Source: FSA

4.5. Technical provisions and fund managers' financial indicators

The architecture of the protection mechanisms for the participants in the private pension system in Romania also includes the prudential financial requirements applicable to fund managers: the minimum level of share capital and the obligation to establish a technical provision calculated actuarially to cover the risk that at retirement the value of the participant's individual assets will be less than the amount of the net contributions made by him. This risk varies depending on the evolution of market volatility during the contribution period, the structure of fund's assets, as well as the duration and time structure of the contributions made.

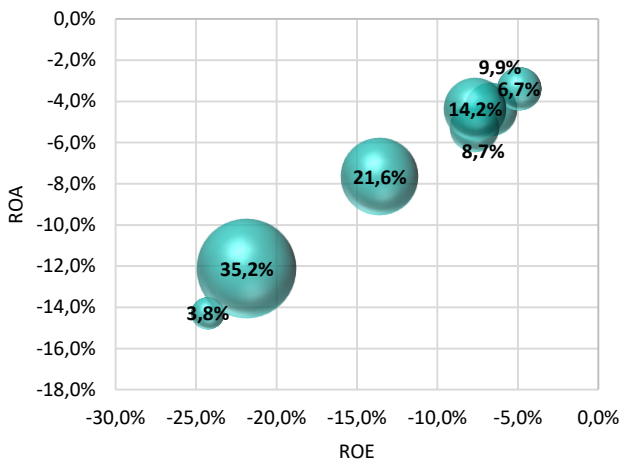
According to the legislation in force, the calculated level of the provision must be covered by eligible assets (with a high quality and liquidity), in this case government securities, deposits and current accounts.

The obligation to calculate and establish the provision belongs to all pension fund managers within Pillar II. In the case of Pillar III, the obligation applies to the managers of voluntary pension funds who offer to the participants the guarantee of the net contributions made.

4.6. Profitability risk for the managers in the private pension system

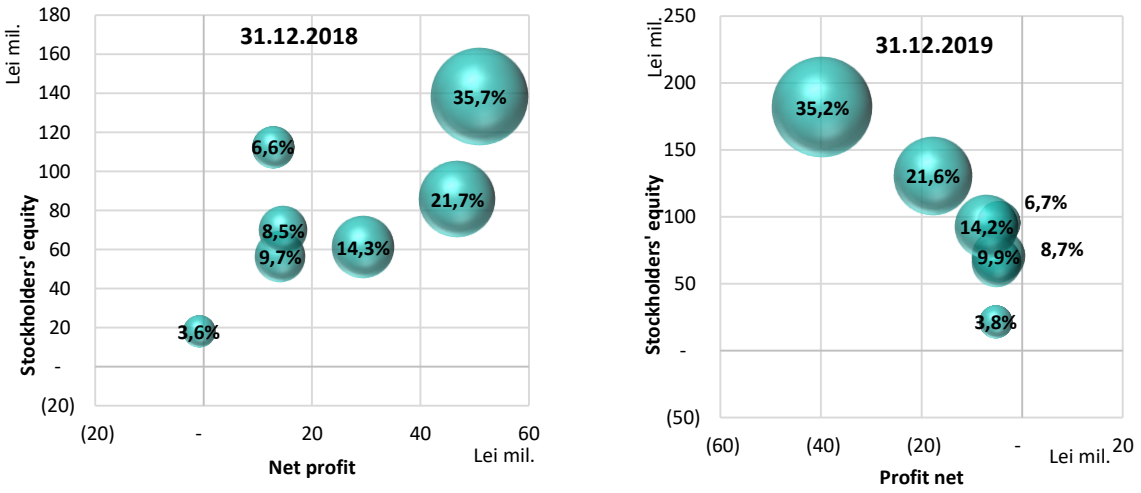
The seven private pension fund managers in Pillar II also manage voluntary pension funds. The legislative amendments during 2018 to 2019 regarding the level of contributions in Pillar II, the reduction of commissions and the way of calculating them depending on the investment performance determined a deterioration of the profitability of the managers in Pillar II.

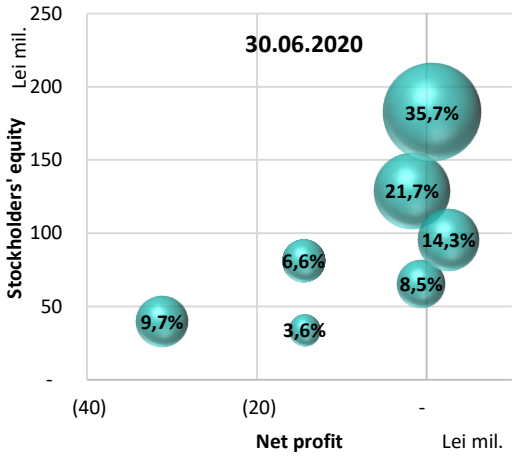
Figure 52 Distribution of Pillar II managers by ROE, ROA and market share of privately managed pension funds as of December 31, 2019



If at the end of 2018 six managers registered net profits amounting to Lei 169 million, with a return on equities between 11% and 54.7% while only one manager obtained a loss of -4.9% of equity, at the end of 2019, all managers had cumulative losses of Lei 84 million, representing between -4.9% and 24.3% of equity.

Figure 53 Deterioration of managers' profitability following legislative changes





In the first six months of 2020, the losses of some of the managers worsened significantly compared to the end of last year.

A number of 5 managers obtained cumulative negative results amounting to Lei 62 million, while the remaining two managers obtained a net profit of Lei 3.24 million.

Source: FSA

The amendment of the minimum capital requirements introduced at the beginning of 2020 restores the minimum share capital to the value of 4 million euros for the administration of a privately managed pension fund. The first 6 months of 2020 showed a good capitalization of the managers of private pension funds, the multiplier of their own funds compared to the minimum share capital being between 1.76 and 9.43.

Figure 54 Distribution of Pillar II managers by total assets, own funds and market share of privately managed pension funds as of June 30, 2020

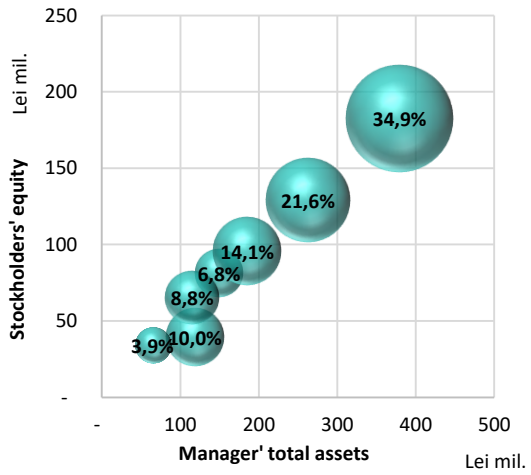
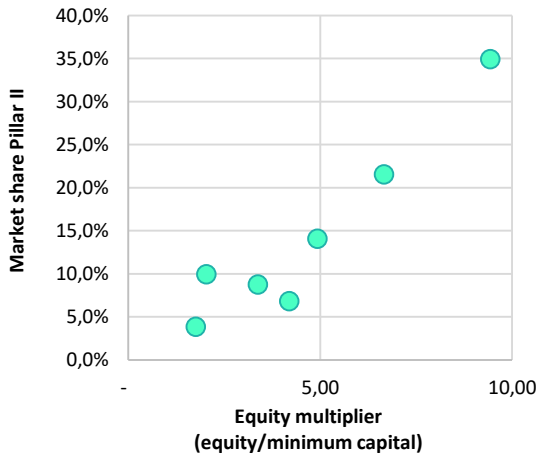


Figure 55 Distribution of Pillar II managers according to the level of own funds compared to the minimum provided by law as of June 30, 2020



Source: FSA

In addition to the 7 managers who manage both Pillar II and Pillar III pension funds, there are three other managers in the voluntary pension system who have a cumulative market share of 60.5% at the end of the first half of 2020. One of them is a life insurance company, the second is an investment management company and the third is a pension fund management company. At the end of 2019, two of the managers obtained a cumulative loss of Lei 3.3 million, while one manager obtained a net profit of Lei 588 thousand. In the first six months of 2020, the cumulative loss of the

two managers represented Lei 691 million, and the profit after 6 months of the other manager was Lei 426 thousand.

If the variable nature of the primary legislative framework applicable to the private pension system is maintained, the risk of profitability will be expected to persist, although managers have the necessary premises to recover losses in the coming years, in the context of the demographic structure of participants who continue the stage of assets accumulation in private pension funds.

4.7. Potential risks and vulnerabilities in the private pension market

In the context of the international uncertainty generated by the COVID-19 pandemic, the private pension system characterized by long-term investment and savings remains the least impacted.

Balanced and prudent diversification has helped the private pension system overcome several episodes of high volatility in the past (eg August 2015, January 2016, June 2016, June 2017 and December 2018), thus overcoming the period of high volatility in March this year caused by the coronavirus pandemic. Although the beginning of April this year started with a calming of the private pension system volatility, it remains high compared to the period pre- pandemic.

Despite temporary episodes of high volatility, pension fund assets have increased year on year, with a growth rate of over 19% in all years since its establishment (the lowest growth rate has been 19.40%, being registered in December 2018), and in September 2020 the assets of private pension funds increased by approximately 18% compared to the end of the previous year.

As a result of *GEO no. 114 of December 28, 2018 on the establishment of measures in the field of public investments and fiscal-budgetary measures, amendment and completion of regulatory acts and extension of deadlines*, a person participating in privately managed pension funds may opt, but not earlier than after 5 years of contribution to the respective fund, to transfer to the public pension system (the personal assets of the participant will remain in his private account until the opening of the right to private pension). By September 2020, a number of 723 people had requested the transfer of future contributions to Pillar I, thus the liquidity risk remained stable. Subsequently, by *GEO no. 1/2020 on some fiscal-budgetary measures and for the amendment and completion of some regulatory acts*, the article on the possibility of transferring contributions to the public system was repealed.

Interest rate risk and systemic market risk depend on the overall investment climate, locally and internationally, outside the sphere of influence of fund managers, while the components of spread risk and individual risk are managed at an appropriate level through portfolio diversification policies applied by fund managers.

The risks related to the stability and proper functioning of pension funds maintain at low level, given the mechanism of operation of the private pension system by defined contributions (at contributions amount), practically excluding the solvency risk which is the main concern for defined benefit pension systems (still prevalent in Europe in both number and assets).

Also, a number of other risks relevant to this area (eg the risk of a possible insufficient replacement rate of the income during the active period with that of private pension or liquidity risk) are not currently applicable in the case of the private pension system in Romania due to its low maturity and the still insignificant share of participants close to retirement at the age limit.

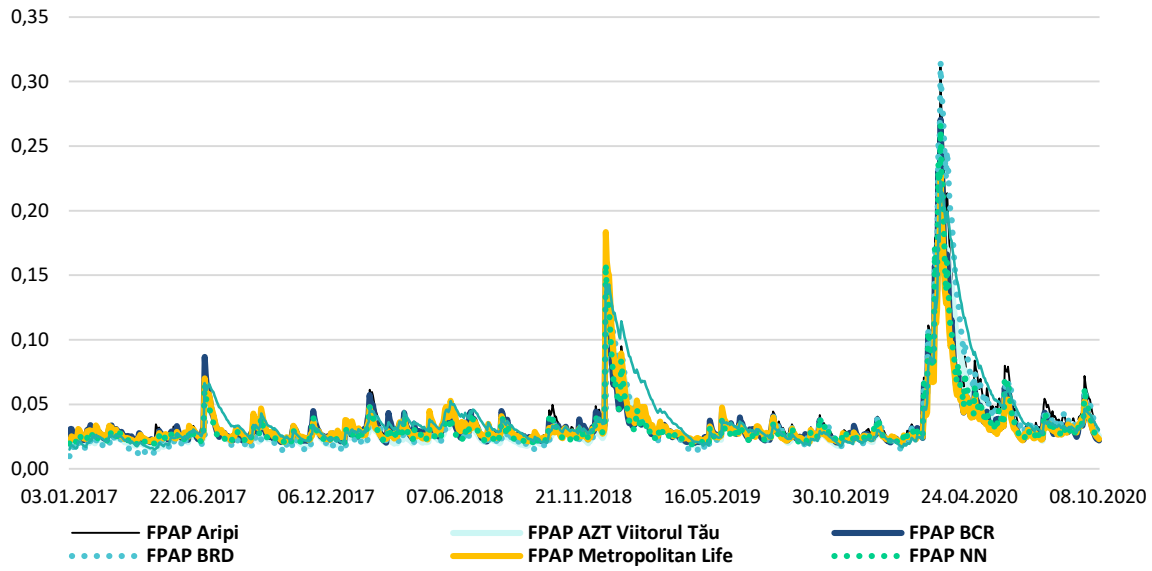
The assets of privately managed pension funds have several security elements, among which we mention: the minimum rate of return, guaranteeing of net contributions, separation of the fund's assets from those of the manager, prudential supervision and the Private Pension System Rights Guarantee Fund.

4.8. The impact of the COVID-19 pandemic on the private pension market

The global economy slowdown due to the COVID-19 pandemic influences the prices of financial instruments, the private pension system being the least impacted considering the long-term savings and investment. Over time, there have been episodes of high volatility that have marked private pension funds, but their assets have risen each year.

The beginning of 2020 (February-March) was marked by an uncertainty on the financial markets given the current epidemiological context. The annualized volatility of the fund units from Pillar II recorded the highest level of the analyzed period, in March, as a result of the propagation of the financial instruments prices fall into the net asset unit value. Subsequently, the level of annualized daily volatility of privately managed pension funds declined, being positioned to a higher level than before the COVID-19 pandemic.

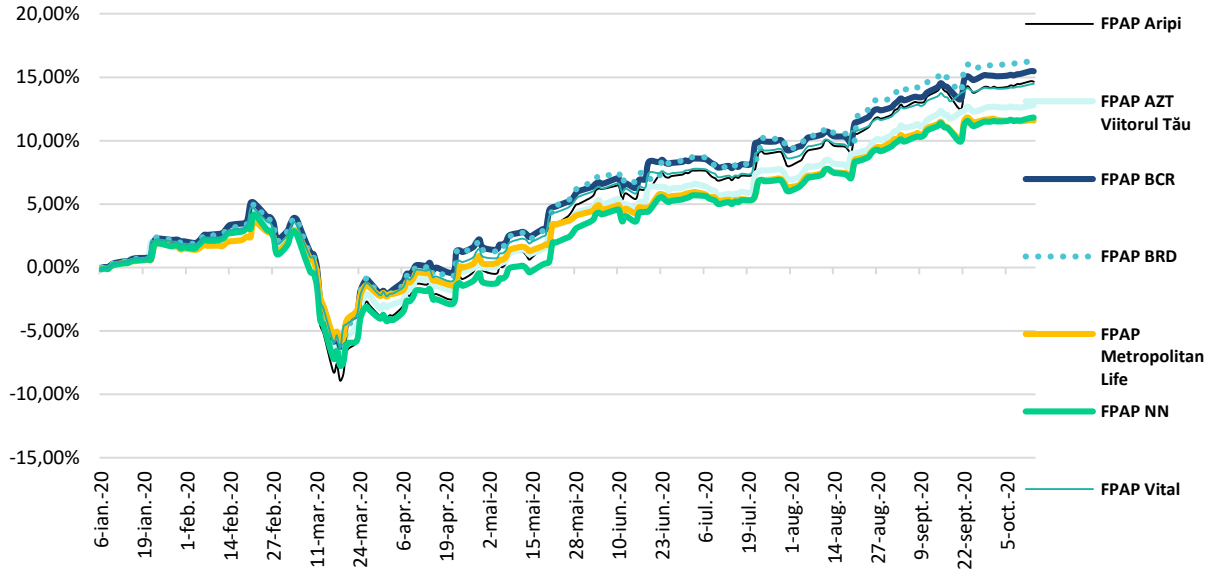
Figure 56 Evolution of the annualized daily volatility of Pillar II pension funds



Source: FSA, FSA calculations (Garch model)

The total assets of the privately managed pension funds (Pillar II) started an upward trend at the beginning of 2020, but later, in March, all pension funds recorded drops of the total assets compared to the value at the beginning of the year. As of May 2020, the assets of private pension funds have reached the level before the outbreak of the COVID-19 pandemic, maintaining an upward trend so far.

Figure 57 Evolution of total assets in privately managed pension funds (Jan. 6 = 100%)

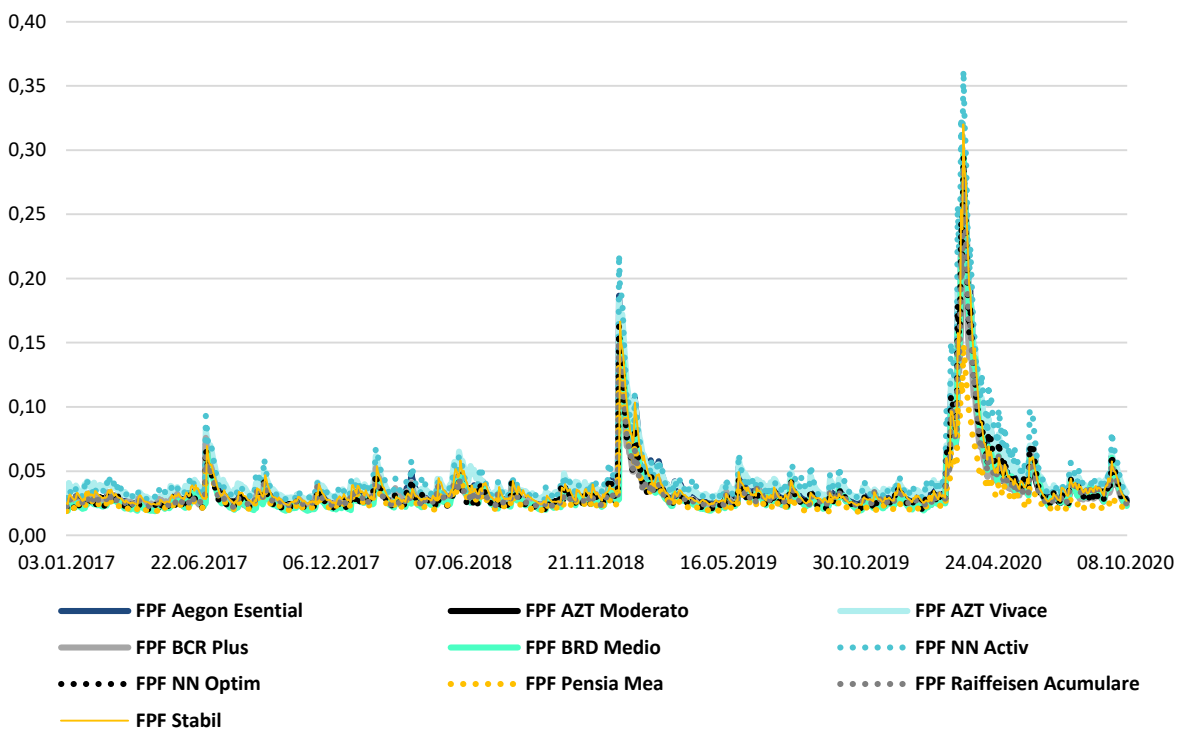


Source: FSA, FSA calculations

The annualized volatility of Pillar III fund units recorded the highest level in the analyzed period in March 2020.

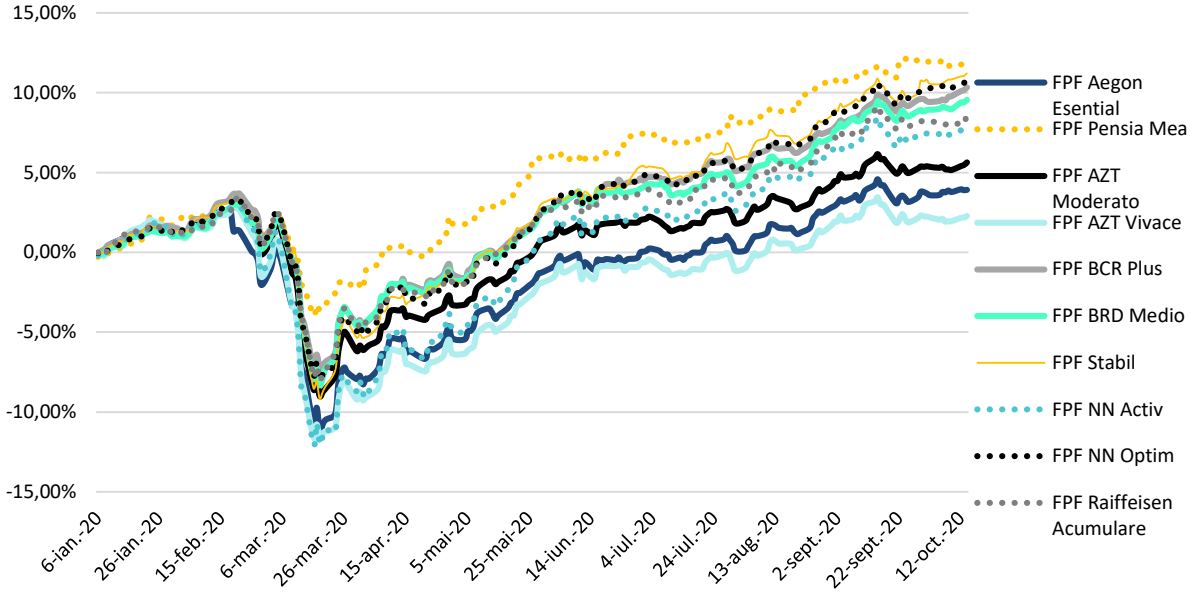
The beginning of April this year began with a calming of the private pension system volatility, which demonstrates that short episodes of turbulence do not impact private pensions in the long run.

Figure 58 Evolution of the annualized daily volatility of Pillar III pension funds



Source: FSA, FSA calculations (Garch model)

Figure 59 Evolution of total assets of voluntary pension funds (Jan. 6 = 100%)



Source: FSA, FSA calculations

The short-term depreciation of financial assets generated by the coronavirus pandemic will not have a significant impact on participants' future pensions, as they are the result of long-term investments. Despite fluctuations in the prices of financial instruments, the total assets of the private pension scheme remain above the guaranteed value.

Following the context induced by the COVID-19 pandemic, FSA requested the managers to implement adequate measures in order to prevent / manage incidental risks. Among the main measures requested were:

- the possibility to modify for a period of one year the investment limit of 70% of the total assets invested in government securities issued by the Romanian state, the European Union or the European Economic Area;
- cyber risk management;
- analyses and updates of internal procedures as a result of the increased fluctuation of pension fund portfolios.

5. Stability of the capital market

The two important segments of the Romanian capital market, namely collective investment undertakings and the stock market, experienced in the first nine months of 2020 an increasing volatility, correlated with a similar trend observed for most capital markets in the region.

The *market of collective investment undertakings* is strongly interconnected with the evolution of capital markets and with the banking market, both the funds' performance and the net capital flows to these entities being dependent on market interest rates, bond yields and stock market indices.

A significant number of entities operate on the *market of collective investment undertakings* (investment funds classified in different types depending on the structure of investments, companies that manage them and depositaries), and each such category of entities faces specific risks.

The capital market is the second largest market supervised by FSA (3.85% of GDP), in terms of the assets value, but also the most complex given the large number of types of entities on this market, their different operating mechanisms, the very ample and varied legislation at European, international and implicitly local level.

The capital market identifies at least the following important types of entities authorized, supervised and regulated by the FSA:

- collective investments undertakings (CIU) along with their managers, depositaries and distributors. Within this very broad category there are important differentiations between:
    - undertakings for collective investment in transferable securities (UCITS - usually open-end investment funds of various types, including money market funds or exchange-traded funds) and alternative investment funds (AIF - can be both open-end and closed-end funds, this category includes the 5 FICs and Fondul Proprietatea);
- the stock market, managed by the Bucharest Stock Exchange, together with all the related sections and trading systems, as well as with the Central Depositary, a key institution within the clearing and settlement infrastructure;
- stock market intermediaries, both investment firms (IF) and local credit institutions and intermediaries from other Member States;
- issuers that are authorized and supervised by the FSA for the fulfillment of transparency requirements.

5.1. Collective investment schemes in a European context

The second quarter of 2020 was characterized by an appreciation of net assets related to investment funds in Europe. According to EFAMA, in the second quarter of 2020 compared to the first quarter of 2019, the net assets of collective investment undertakings and of alternative investment funds increased by 3.45% and 3.21%, respectively.

According to statistics published by EFAMA, in the second quarter of 2020, the cumulative value of net subscriptions of UCITS was about EUR 272 billion compared to the first quarter of 2020, out of which the European UCITS market registered net outflows amounting to EUR 176 billion. Net subscriptions of alternative investment funds in Europe dropped from around EUR 50,973 million

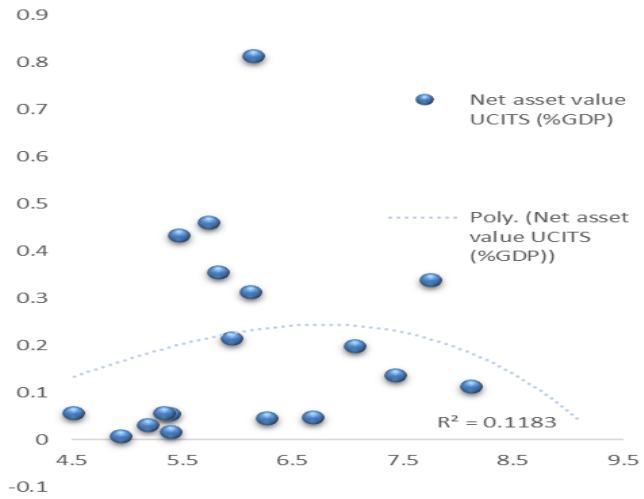
(first quarter 2020) to EUR 595 million (second quarter 2020), due to the fact that investors sold their fund units.

The most remarkable increases in net subscriptions were recorded in the case of money market funds, which had in the second quarter of 2020 net inflows of about EUR 136 billion, with the ARIS funds (Absolute Return Innovative Strategies) at the opposite pole with net outflows of EUR 4 billion. In the case of the AIF, on the other hand, the highest value of net inflows was found for "other AIF" (+ EUR 25 billion), while AIF bond funds recorded net outflows of EUR 15 billion.

Figure 60 Net assets (EUR billion) of UCITS (% of GDP, EUR billion; left)

Source: EFAMA, FSA calculations

Figure 61 Elasticity of UCITS holdings compared to GDP growth (right; GDP turned into natural logarithm)



Source: EFAMA, FSA calculations

A total of 23 of the 28 European countries recorded net inflows into UCITS, including Ireland (EUR 66 billion), Luxembourg (EUR 32 billion) and Switzerland (+8 billion EUR), in terms of the highest net inflows in the second quarter of 2020. The net assets of UCITS increased by 3.45% in the second quarter of 2020 compared to the second quarter of 2019.

In the second quarter of 2020, 11 countries recorded net inflows into the AIF, the largest amounts being observed in the case of Germany (EUR +39 billion), Ireland (EUR +18 billion) and Switzerland (EUR +8 billion). The net assets of alternative investment funds stood at EUR 6,602 billion on June 30, 2020, up 3.21% compared to June 30, 2019.

As of June 30, 2020, the investment fund market in Europe comprised 63,291 investment funds (up by 1.20% compared to the end of the first half of 2020: 62,538), of which 34,190 were undertakings for collective investment in transferable securities (UCITS), respectively 29,101 were alternative investment funds (AIF).

In the case of Romania, in the first half of 2020, the net assets value of collective investment undertakings relative to GDP was 2%. Bulgaria and Hungary had a share of 1%, Poland 5%, Slovenia 6%, Croatia 4% and Germany 11%.

The highest values were recorded by Luxembourg, followed by Ireland, Switzerland and Sweden. These values are explained by the fact that these countries recorded the most significant net assets.

5.1. Undertakings for collective investment

In the first half of 2020, the total value of the collective investment undertakings assets in Romania was Lei 40.46 billion, increasing by about 8% compared to the previous quarter. At the end of the first semester, a number of 18 investment management companies (IMCs), 83 open-end investment funds (OEIFs), 26 closed-end investment funds (CEIFs), 5 financial investment companies (FICs), Fondul Proprietatea and 4 depositaries were operating in Romania.

Table 14 Number of CIUs and IMCs

Category of entity	Dec 31, 2009	Dec 31, 2018	Dec 31, 2019	June 30,2020
	Number of entities	Number of entities	Number of entities	Number of entities
Investment management companies	20	18	18	18
Open-end investment funds	51	78	82	83
Closed-end investment funds	16	24	26	26
Financial investment companies	5	5	5	5
Fondul Proprietatea	1	1	1	1
Depositaries	9	4	4	4

Source: FSA

The number of investors in closed-end investment funds is much lower than that of investors in OEIF. At the end of June 2020, the number of investors in OEIF decreased compared to the end of 2019 by 15,045 investors, and the number of investors in CEIF was 88,621 (most are individual - 88,336 persons).

Table 15 Depositaries of CIU assets

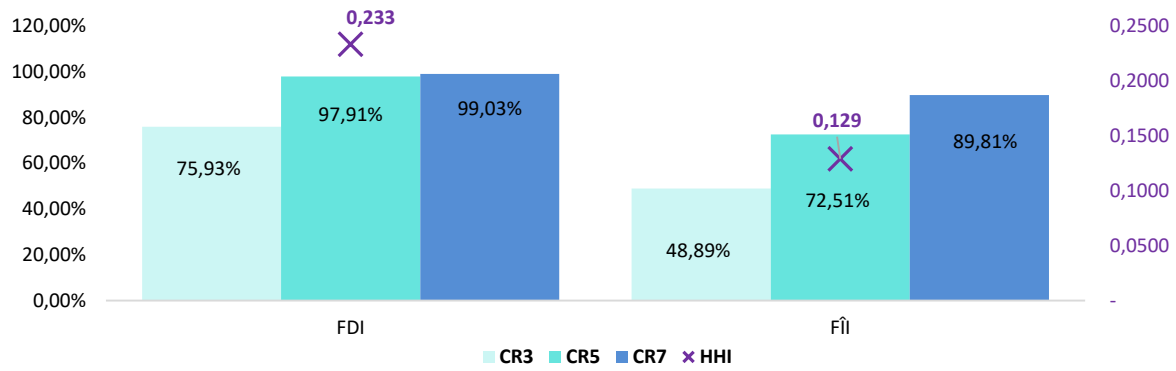
Depositary	Total assets June 30, 2020 (lei)
BRD – Groupe Société Générale SA	23,794,446,321
Banca Comercială Română SA	9,598,610,154
Raiffeisen Bank SA	6,839,662,715
Unicredit Țiriac Bank SA	231,600,902
TOTAL ASSETS	**40,464,320,092**

Source: FSA

The degree of concentration on the depositary services market for open-end investment funds is high, whereas in the case of closed-end investment funds is medium.

For the open-end investment fund market, analyzed from the perspective of the assets managed by IMCs, the Herfindahl-Hirschman index has a value of 0.233, which shows a high degree of concentration. This is also confirmed by the CR ("concentration rate") indicators.

Figure 62 Degree of concentration on the investment funds market in Romania (net assets on June 30, 2020)



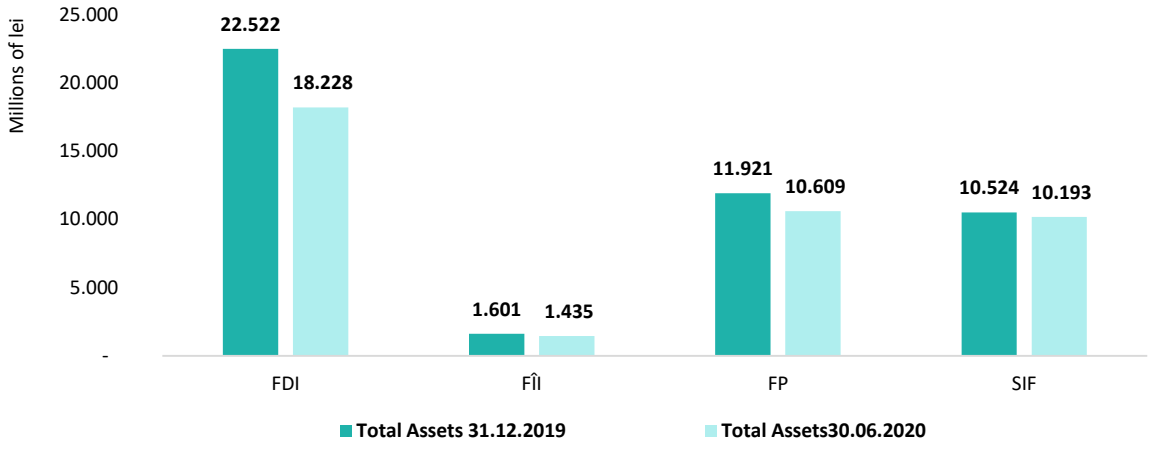
Source: FSA

Depending on the object of activity, an investment management company may manage open-end and closed-end investment funds, as well as individual investment accounts. In the market as a whole, open-end investment funds are more numerous than closed-end ones and accumulate significantly higher value assets.

The total value of the assets of collective investment undertakings (CIU) in Romania is Lei 40.46 billion as of June 30, 2020, increasing by about 8% compared to the previous quarter.

An analysis by categories of collective investment undertakings shows that at the end of the first half of 2020, the total assets of open-end investment funds (OEIF) decreased by approximately 19% compared to the end of December 2019 and Fondul Proprietatea showed a decrease in total assets of about 11% compared to the end of 2019.

Figure 63 Evolution of total assets by CIU categories (million lei)



Source: FSA

From the perspective of the investment portfolio, OEIFs are mainly oriented towards fixed income instruments (government securities and bonds), while CEIF, FICs and FP have a dominant orientation towards equity investments.

On the market as a whole, the consolidated investment structure of all collective investment undertakings indicates a preference for equity securities whose total value is about Lei 20.02 billion, accounting for a share of about 49% of the cumulative assets of CIU. Investments in fixed income financial instruments at the level of the entire market are worth Lei 19.05 billion, representing approximately 47% of the CIU total assets.

Table 16 Structure of investment portfolios by CIU categories and asset classes (lei)

Total assets – June 30, 2020	Open-end funds	Closed-end funds	FICs	FP	TOTAL
Stock	890,476,265	1,064,609,377	8,616,282,410	9,448,988,131	**20,020,356,182**
Bonds	5,519,689,346	42,588,739	206,036,380		**5,768,314,465**
Government securities	8,641,789,296	-		152,042,631	**8,793,831,927**
Deposits and cash	3,488,829,494	104,153,445	327,718,827	570,721,626	**4,491,423,392**
UCITS / non-UCITS securities	787,380,514	146,333,904	972,721,471		**1,906,435,889**
Others	- 1,100,432,184	77,479,692	69,962,024	436,948,703	**- 516,041,764**

Source: FSA

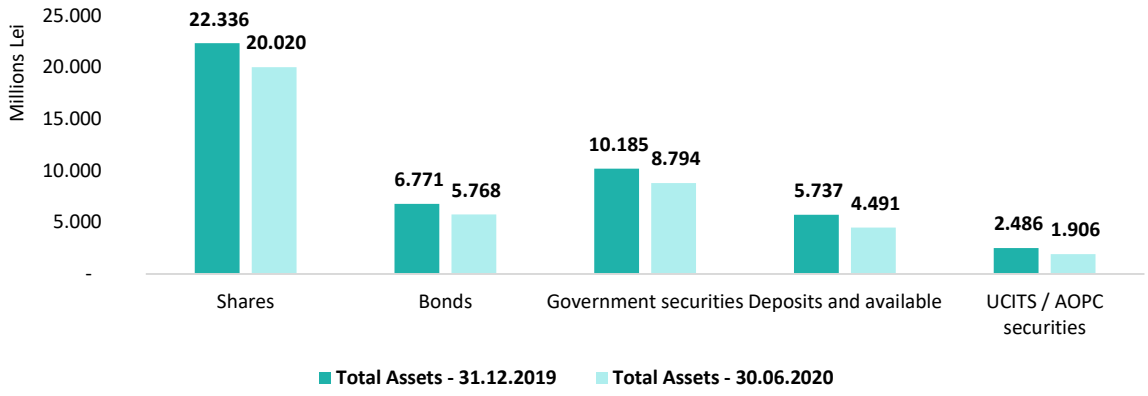
On June 30, 2020, compared to the end of 2019, there is a decrease in investments made in stock (-10%), government securities (-14%), and in UCITS / non-UCITS securities the fall was of 23%, simultaneously with a reduction in deposits and cash (-22%) and bonds by about 15%.

The structure of OEIF portfolios is mainly oriented towards fixed income financial instruments. Of these, the most significant share in the total assets of open-end funds is held by government securities (47%), followed by listed corporate bonds (30%). Also, bank deposits still have a high share in total assets (17%).

Regarding the portfolio of CEIF investments, it is found that they are mainly oriented towards investments in stock, which hold a share of approximately 74% of the total assets of the CEIF, of

which about 69% of the total assets represent investments in listed shares. There is also a much lower preference for fixed income instruments. Thus, investments in bonds hold a share of approximately 3% of total assets, being significantly lower compared to the share of investments in OEIF shares.

Figure 64 Evolution of the strategic allocation of CIU portfolios



Source: FSA

At the end of June 2020, 83 open-end investment funds operated in five categories: equity funds (25), bond funds (31), diversified funds (16) and mixed funds (11: stock-bond combination). Given the high number of bond funds and the value of their net assets, it is found that investors' preference is maintained in the first half of 2020 for investment strategies oriented towards fixed income instruments.

Bond funds hold the largest share in this market segment. Equity and diversified funds are also well represented, which shows that investor interest in these two asset classes (bonds and equities) is significant.

Table 17 Structure of net assets by categories of Open-End Investment Funds

OEIF depending on investment policy	Net assets Dec 31, 2018 (lei)	Net assets Dec 31, 2019 (lei	Net assets June 30, 2020 (lei
Equity funds	598,334,414	881,052,086	831,074,042
Diversified funds	3,919,533,165	3,212,103,191	2,613,992,825
Bond funds	14,224,982,174	17,972,448,926	14,401,971,517
Money market funds	234,108,591	-	-
Mixed funds	432,323,219	433,418,300	354,193,008
TOTAL	**19,409,281,562**	**22,499,022,503**	**18,201,231,391**

Source: FSA

The highest share in OEIF cumulative net assets is held by bond funds, about 79%. Diversified funds rank second in terms of market share, accounting for about 14% of OEIF's cumulative net assets.

Among the categories of closed-end investment funds, diversified funds are the best represented in terms of net assets value (they hold a share of over 45% in the cumulative net assets of CEIFs), which shows that the interest of investors in closed-end funds for this asset class is significant. In terms of market share, diversified funds are followed by equity funds (36% of net assets). Thus, at the end of the first semester of 2020, about 81% of the total net assets managed by CEIFs are coordinated by equity and diversified funds. The net assets of the closed-end bond fund, amounting to Lei 1.6 million, represent only 0.11% of the cumulative net assets of the CEIFs.

The main risks to which the open-end funds market is exposed remain market risk, credit risk and counterparty concentration risk. Credit risk is managed at a low level, given the high share of sovereign bonds in the portfolios of investment funds.

However, market risk is a normal concern given the profile of institutional investors of these entities, which is managed mainly through diversification and hedging operations in the case of currency risk.

At the end of the third quarter of 2020, compared to the end of 2009, the cumulative net assets of FICs increased by approximately 21%, and the financial investment company that had the highest appreciation of net assets is FIC Banat-Crişana (FIC1), of about 70%. At the end of June 2020, investments in shares have the highest share in the total cumulative assets of FICs (approximately 85%).

Table 18 Synthetic evolution of the five financial investment companies

DATA	Indicatori	SIF1 Banat-Crişana	SIF2 Moldova	SIF 3 Transilvania	SIF4 Muntenia	SIF5 Oltenia
31.12.2009	NAV (lei)	2.8087	2.2684	1.4905	1.8310	2.8327
	Market price	1.1300	1.1400	0.680	0.710	1.270
	Discount (%)	59.77%	49.74%	-54.38%	-61.22%	-55.17%
	Net assets (lei)	1,541,528,936	1,177,520,257	1,627,806,279	1,477,676,967	1,643,350,549
30.09.2020	NAV (lei)	5.1007	1.94	0.4967	1.8958	3.6609
	Market price	2.0700	1.28	0.393	0.730	1.950
	Discount (%)	59.4%	34%	20.9%	61.5%	46.7%
	Net assets (lei)	2,624,536,099	1,909,828,534	1,074,057,465	1,487,511,205	1,911,554,899
	No. of issued shares	517,460,724	989,479,176	2,162,443,797	784,645,201	522,149,143

Source: FSA, BSE, FIC Reports

The total value of net assets managed by Fondul Proprietatea was Lei 9.90 billion, at the end of September 2020, dropping by approximately 17% compared to December 2019. FP assets were mainly concentrated in Romania.

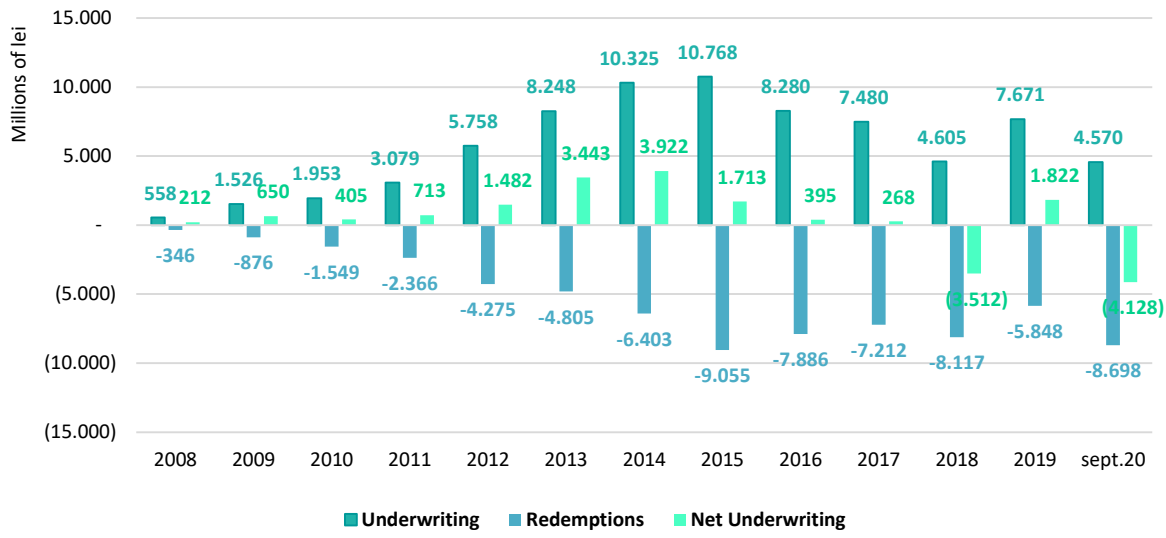
Table 19 Synthetic evolution of Fondul Proprietatea

Portfolio items	Dec 31, 2018	Dec 31, 2019	Sept 30, 2020
Number of issued shares	9,101,963,263	7,613,970,697	7,210,158,254
Net Assets (lei)	10,232,198,304	11,871,445,440	9,909,192,128
NAV	1.4095	1.7339	1.5881
Closing price (lei)	0.8830	1.2100	1.2950
Discount (%)	37.35%	30.22%	18.46%

Source: Fondul Proprietatea

The figure below shows the evolution of net subscriptions (subscriptions - redemptions) of investment funds sold on the local market (both authorized in Romania and abroad), according to information published by the Fund Managers Association in Romania. The local financial markets climate has generally been favorable for the fund industry (2008-2017), benefiting annually from net capital inflows, even during the years of the global financial crisis and the sovereign debt crisis in Europe, but the trend reversed in 2019, when the net subscriptions re-entered positive territory. However, at the end of September 2020 negative values are recorded.

Figure 65 Evolution of net subscriptions (OEIF, CEIF and foreign funds)



Source: AAF

5.2. The stock market

Following the growing trend and reaching the psychological threshold of 10,000 points in the first part of January 2020, the ends of February and March were marked by a major decline in stock market indices due to the global spread of the COVID-19. Amid the easing of the restrictive measures during the summer period, both the BET and BET-FI indices bounced back compared to March 2020, but nevertheless they did not reach the values recorded before the outbreak of the pandemic.

Both during the global financial crisis and the COVID-19 crisis in the first quarter of 2020, the sectors with the largest shares in the capitalization of the local stock market, namely the financial sector and the energy sector (including oil, gas, exploitation and transport, utilities) had the highest volatility on a global scale. This explains partly the relatively low performance of the local market compared to the global trends in the analyzed period.

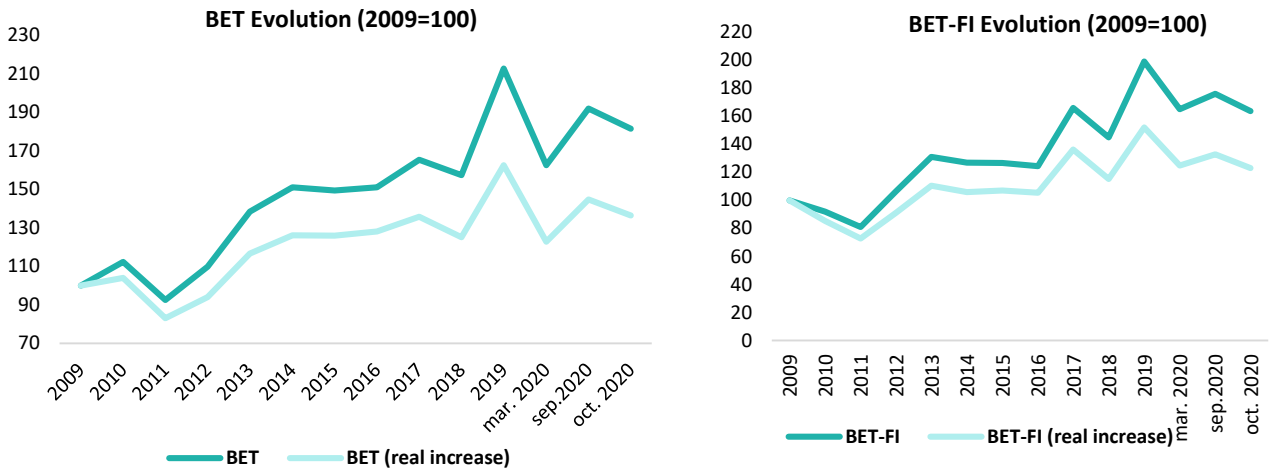
Table 20 Annual variation of local stock market indices vs. variation of the Consumer Price Index

An	BET	BET-BK	BET-FI	BET-NG	BETPlus	BET-TR	BET-XT	BET-XT-TR	IPC
2010	12.3%		-8.0%	29.5%			1.9%		8.0%
2011	-17.7%		-12.0%	-20.7%			-13.8%		3.1%
2012	18.7%		31.2%	2.6%			19.9%		4.9%
2013	26.1%	19.1%	23.3%	6.1%			23.4%		1.6%
2014	9.1%	3.7%	-3.2%	5.7%			6.3%		0.8%
2015	-1.1%	2.6%	0.0%	-14.0%	-1.3%	3.1%	0.3%		-0.9%
2016	1.2%	0.2%	-1.9%	-3.0%	1.7%	9.7%	0.5%	8.4%	-0.5%
2017	9.4%	22.8%	33.4%	10.8%	10.7%	19.1%	14.5%	23.8%	3.3%
2018	-4.8%	-11.6%	-12.6%	-7.4%	-4.8%	4.3%	-7.6%	0.5%	3.3%
2019	35.1%	29.7%	37.3%	30.3%	34.3%	47%	34.4%	45.6%	4.0%
2020*	-14.7%	-14.4%	-17.8%	-20.0%	-14.5%	-10.4%	-16.7%	-12.7%	1.6%

Source: BSE, FSA calculations, * last valid date Oct 31, 2020

As it can be seen from the table above, local stock market indices have generally had remarkable developments in the years after the global financial crisis, both in terms of actual dynamics and in relation to local rate of inflation, the rises registered in 2019 compared to 2018 being the most significant. This is also due to the fact that in 2019 BVB passed to the status of emerging market. On the other hand, due to the spread of COVID-19 virus, in October 2020, compared to December 2019, the stock market indices fell abruptly, the BET-NG index (-20.0%) having the largest decrease.

Figure 66 Comparative evolution of BET and BET-FI indices



Source: Datastream, INSSE, FSA calculations

After the global financial crisis of 2007-2009, the evolution of the Romanian capital market was strongly impacted by the sovereign debt crisis of 2011. The BET index dropped by 8% in 2011, while the BET-FI index fell by approximately 20%. The BET index rose by 81%, in nominal terms, in October 2020 compared to 2009, and in real terms (excluding inflation) by 36%, while the BET-FI index rose by 64%, and in terms real by 23%. However, compared to 2019, the chart shows the fall of both indices recorded in October 2020.

In the third quarter of 2020, the cumulative value of transactions for the main market and MTS rose by 56.27%, from Lei 8.12 billion in the third quarter of 2019, to Lei 12.69 billion in the third quarter of 2020. The 3 issues of government bonds under the Fidelis program of the Ministry of Public Finance have largely led to this increase in the value of government securities transactions on the stock exchange. Therefore, the most significant amount of Lei 814.55 million was raised on the issue with the symbol R2508AE denominated in Euro and maturing in the summer of 2025. The issue of securities with the symbol R2208A, maturing in 2022, reached the value of Lei 562, 37 million, and that with maturity in 2024 (R2408A) amounted to volumes equivalent to Lei 662.49 million.

The number of transactions carried out on the Bucharest Stock Exchange (BSE) dropped by 10.20% in the third quarter of 2020 compared to the third quarter of 2019.

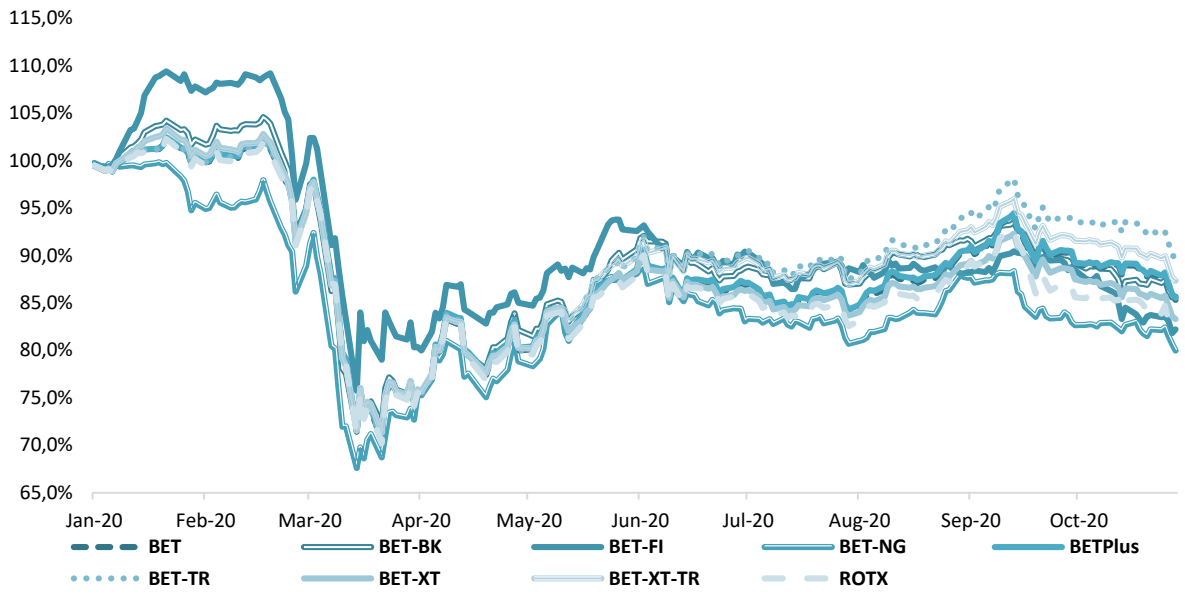
Table 21 Structure of transactions carried out at BVB (BVB market and MTS), based on the value corresponding to each type of instrument

Type of instrument	Sept 30, 2020			Variations Sept 30, 2020 vs. Sept 30, 2019 (%)	
	No. of transactions	**Value (lei)**	**Value weigh in total (%)**	**No. of transactions**	**Value**
Shares, including rights	649,441	9,862,891,472	77.73%	63.48%	25.75%
Other bonds, including EUR-BOND, EUR-TBILLS and EUR-TBONDS	11,046	971,901,616	7.66%	-97.22%	611.91%
Structured products	79,464	591,174,790	4.66%	90.70%	344.03%
Government securities	7,998	1,252,507,000	9.87%	10423.68%	45915.62%
Fund units	4,724	10,186,469	0.08%	152.22%	151.65%
Total	**752,673**	**12,688,661,347**	**100.00%**	**-10.20%**	**56.27%**

Source: BSE

All the Romanian stock market indices registered negative evolutions, of over 8%, at the end of September 2020, compared to the end of 2019. The BET reference index, which captures the evolutions of the most traded companies on the BVB regulated market, had a decrease of about 10% on September 30, 2020 compared to the end of 2019.

Figure 67 Evolution of BVB indices during January 3, 2019 - October 30, 2020 (Dec 31, 2019 = 100)



Source: BSE

The BET-NG index, a *sector-type index that reflects the evolution of companies listed on the regulated market of BVB that have the main field of activity energy and related utilities*, registered on October 30, 2020 the most significant fall, of approximately 20%. Also, the ROTX index and the BET-FI index dropped by 17% on October 30, 2020 compared to the end of 2019.

However, all BVB indices, except the BET-FI index (-1%), turned positive at the end of October 2020 compared to March 2020, the BET-TR index (17.23%) registering the most important rise.

BSE regulated market

The regulated market is the trading place of equity securities (shares and rights issued by entities in Romania and abroad), debt securities (corporate, municipal and state bonds issued by entities in Romania and international corporate bonds), equity securities in collective investment undertakings (shares and fund units) and structured products.

The total value traded with equity securities surged by 26% in the third quarter of 2020 compared to the third quarter of 2019, and the number of transactions increased by about 64%.

The value of transactions in equity securities (shares, rights and fund units) rose by approximately 26% (shares and rights) and by 151.65% in the case of fund units, in third quarter of 2020, compared to the value recorded in the same period of the previous year.

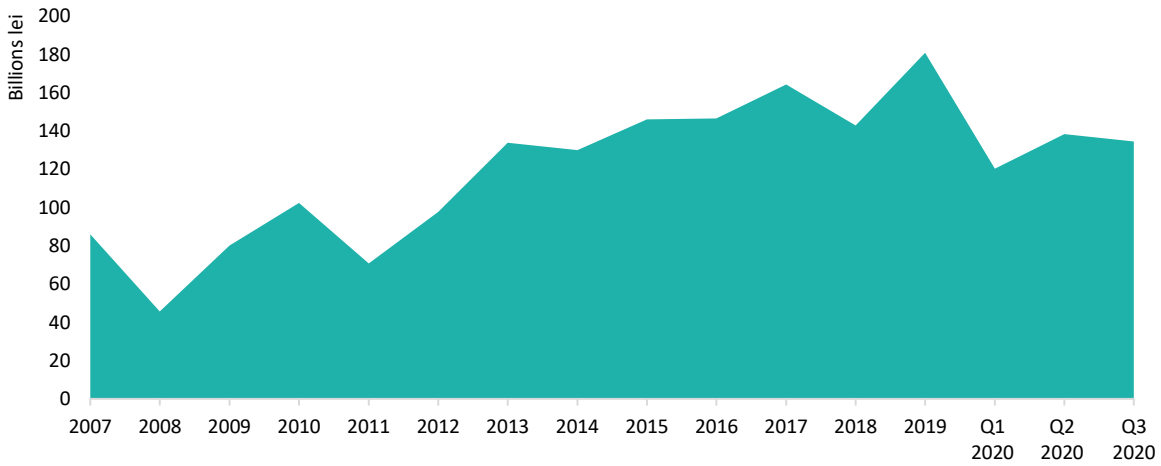
The highest traded value in the last two years was recorded in September 2020 (Lei 2.7 billion), due to an accelerated private placement of 1.7 billion shares of the company OMV Petrom S.A., that worth Lei 561 million, followed by the shares issued by Societatea Energetica Electrica (EL), Banca Transilvania (TLV) and Fondul Proprietatea (FP).

The Ministry of Public Finance issued government securities amounting to 9.87% of the total transactions carried out in the third quarter of 2020. The stocks remain the dominant class of financial assets, with a share of 77.73% of the total value traded on the BVB on September 30, 2020.

The first 5 most liquid companies on the main market of BSE were still represented by TLV (Banca Transilvania SA), FP (Fondul Proprietatea), BRD (Banca Română pentru Dezvoltare - Groupe Societe Generale SA), SNP (OMV PETROM SA) and SNG (SNGN ROMGAZ SA), with transactions of over 73% of the total value traded on the main BVB market.

The market capitalization showed a positive evolution during the analyzed period. The highest value was registered in 2019 (+ 26%) compared to the end of 2018 which was influenced by the political framework in Romania. Due to economic uncertainties related to the effects of the coronavirus pandemic, the Bucharest Stock Exchange recorded a drop in capitalization of about 33% at the end of the first quarter of 2020 compared to the end of 2019. In the third quarter of 2020 compared to the previous quarter there was a drop of only 3% in capitalization, and compared to the first quarter of 2020 there was a return of about 12%.

Figure 68 Evolution of BSE capitalization (stocks)



Source: BSE

BSE multilateral trading system (MTS)

According to the latest legislative definitions in force, the term "alternative trading system" (ATS) has been replaced by "multilateral trading system" (MTS).

As of September 30, 2020, there were 294 financial instruments available for trading on MTS: 279 financial instruments tradable on the XRS1 market and 15 financial instruments tradable on the XRSI market. The number of financial instruments available for trading is declining.

During the first three quarters of 2020, approximately 75 thousand transactions on MTS were carried out with a total value of about Lei 317 million, increasing by 63% compared to the same period of the previous year. In the third quarter of 2020, the most traded financial instruments by investors on MTS were stocks, whose value represents about 90% of the total traded value.

The companies whose shares were most often traded in the third quarter of 2020 were CBKN (Commerzbank AG), NRF (Norofert S.A.) and BNET (Bittnet Systems SA Bucharest).

5.3. Intermediaries

At the end of June 2020, a total of 27 intermediaries were operating on the BSE market, of which 16 investment firms (IFs), 4 local credit institutions and 7 entities authorized in other EU Member States.

At the end of June 2020, a total of 20 intermediaries were active within the MTS, of which 15 investment firms (IFs), 4 local credit institutions and an investment firm authorized in another EU Member State.

Table 22 Categories of intermediaries on the regulated market administered by BSE and MTS

Category	Registered in the NSC Register in 2009*	BVB June 30, 2020	MTS June 30, 2020
Investment firms (IFs)	63	16	15
Local credit institutions	15	4	4
Investment firms from other EU Member States	802	4	1
Credit institutions from other EU Member States	117	2	
Branch of a credit institution from other EU Member States		1	
TOTAL	**997**	**27**	**20**
* *registered in the NSC Register (Bucharest Stock Exchange and Sibiu Monetary-Financial and Commodity Exchange)*			

Source: BSE, FSA calculations

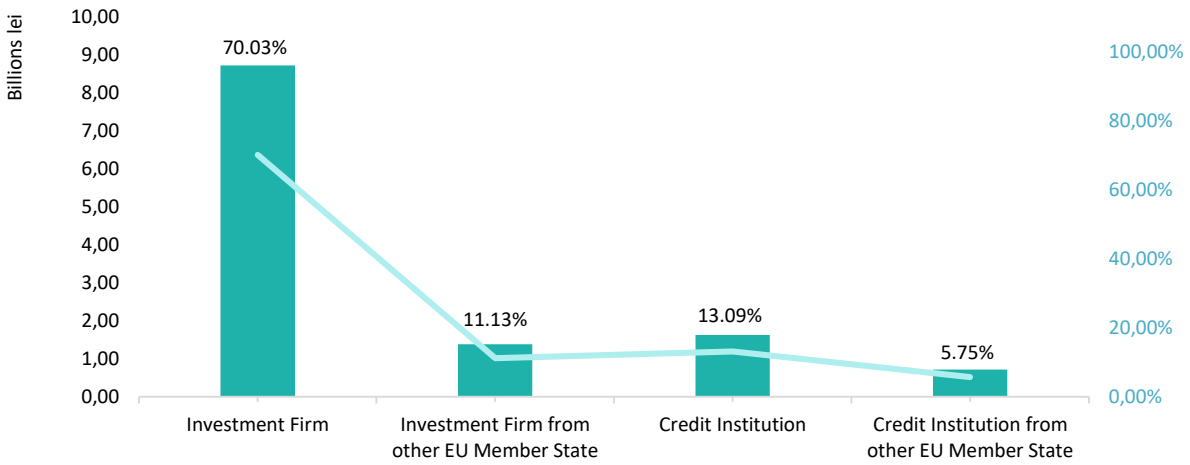
Among the intermediaries that ceased their activity during this period there were also important names, with significant market share, which took the strategic decision to give up as a result of the pessimistic forecasts regarding the future evolution of the activity indicators.

For example, out of the top 10 intermediaries at the end of 2008, a number of important companies at that time no longer operate at the end of 2018: ING Bank NV Amsterdam - Bucharest Branch, Intercapital Invest, UniCredit CAIB Securities Romania, etc.

At the end of June 2020, the most active intermediaries on BSE (regulated market and MTS) were the IFs, the value intermediated by them being of approximately Lei 9 billion. Local intermediaries (IFs and credit institutions) accounted for about 83% of the total intermediated value.

Of the intermediaries authorized in other EU Member States that traded on spot markets, the most active were the investment firms, which accounted for a market share of 11.13%.

Figure 69 Value traded on spot markets by intermediary categories as of June 30, 2020

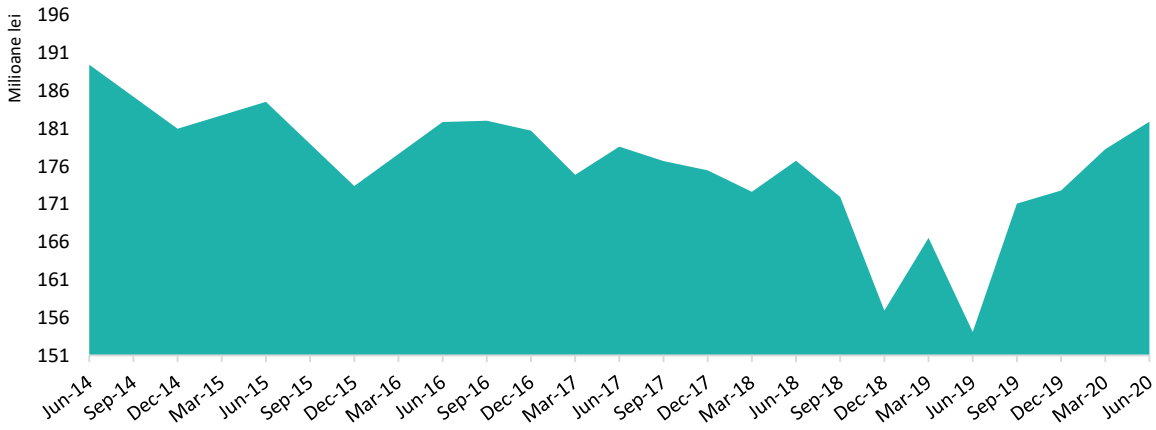


Source: BSE, FSA calculations

The top 10 companies hold approximately 87% of the total brokered value in the first half of 2020. Of these, 7 are investment firms (IFs), a local credit institution, an investment firm authorized in another EU Member State and a credit institution from other EU Member States.

The cumulative value of IFs own funds rose compared to December 2019 by approximately 5%, reaching the level of Lei 182 million and temporarily reversing the downward trend in the value of this indicator.

Figure 70 Total value of IFs own funds

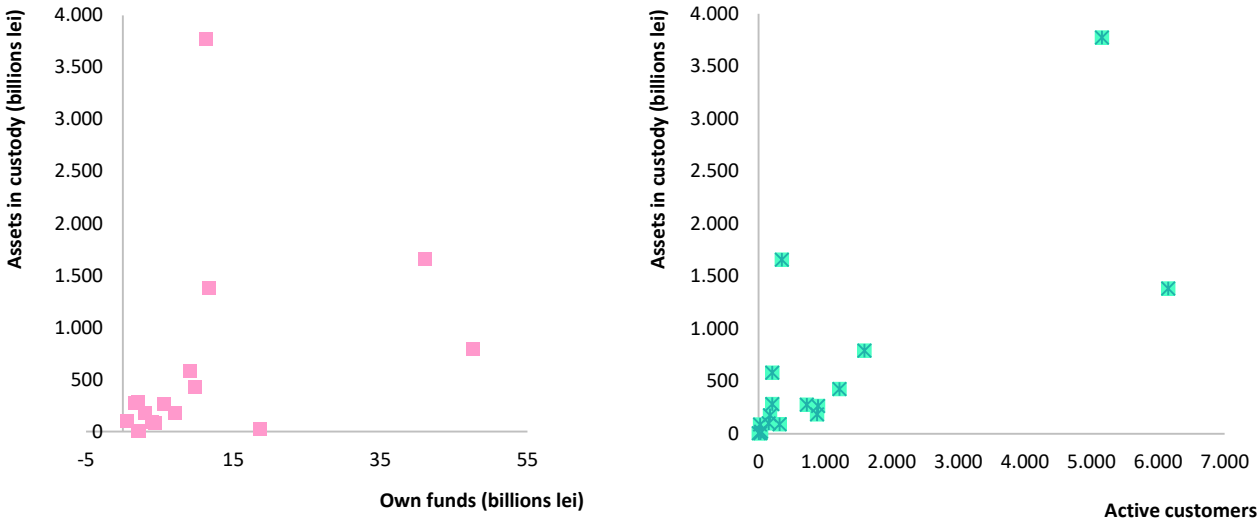


Source: FSA

At the end of June 2020, the IFs had in custody a total value of assets of Lei 10.10 billion (approximately EUR 2.13 billion), representing both customers' cash and financial securities held by them.

The total number of IFs active customer accounts was 18,149 (an investor can have accounts opened with several intermediaries simultaneously), at the end of June 2020. The charts below show that the value of assets in custody is generally correlated with the number of active accounts.

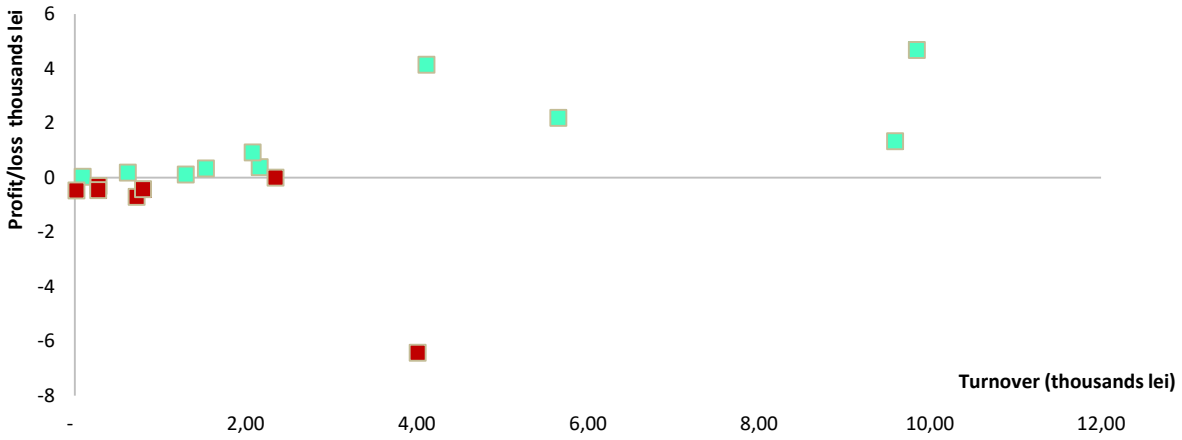
Figure 71 Value of assets in custody reported in terms of own funds (left), compared to the number of active accounts (right)



Source: FSA

In the first half of 2020, the profit made by intermediaries (IFs) dropped significantly, only 10 firms out of 17 managing to gain a profit[27] in a cumulative value of Lei 14.35 million, while 7 firms recorded a cumulative loss of Lei 8.84 million. Also, the value of assets in custody decreased in the first half compared to the end of 2019 by 8.35%, from Lei 11.02 billion to Lei 10.10 billion.

Figure 72 Financial results of IFs

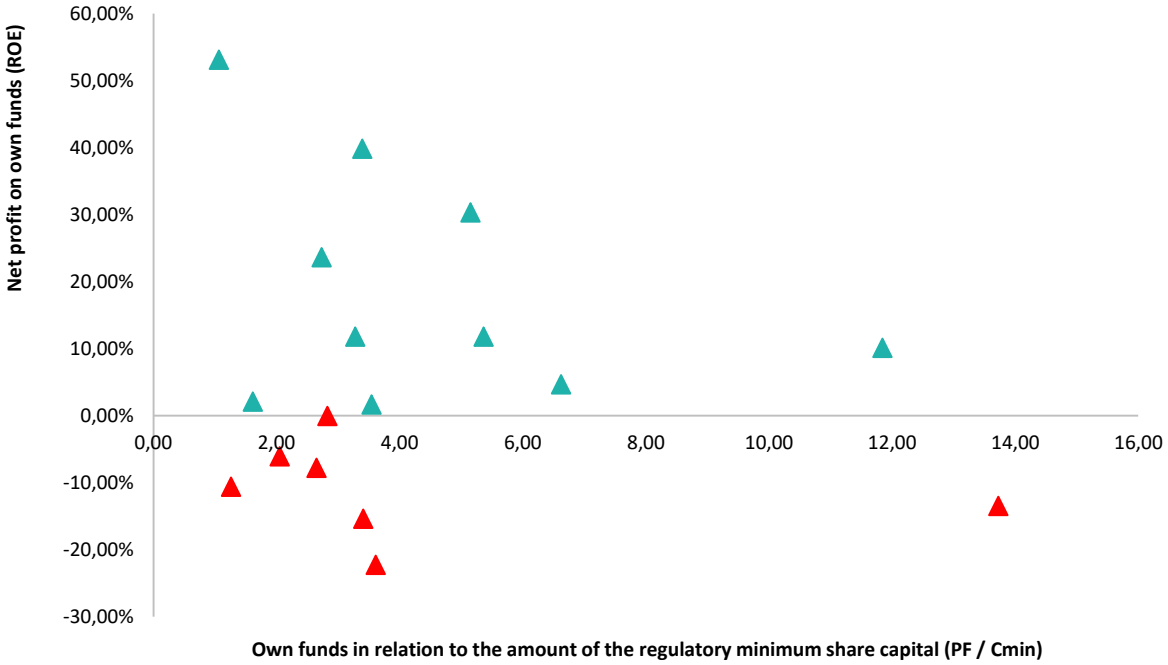


Source: FSA

[27] The results presented are in accordance with the preliminary balance sheets for June 2020, the audited financial results not being available at the date of the report.

The value of own funds in the first half had a positive evolution as a whole by 5.27%, this increase being due to the inclusion of the profit registered at the end of 2019 in the own funds in the case of some companies.

Figure 73 Distribution of IFs according to the level of own funds and the net result in the first half of 2020



Source:

5.4. Market infrastructure institutions. Central Depositary

The Central Depositary, along with the Bucharest Stock Exchange, is the most important infrastructure institution of the local capital market. It fulfills multiple roles, of which the most visible and important are the record keeping of holdings and ensuring the completion of clearing and settlement processes. At the end of 2019, the Central Depositary was authorized by the Financial Supervisory Authority (as competent authority), the National Bank of Romania and the European Central Bank (as relevant authorities) in accordance with *EU Regulation no. 909/2014 (CSDR) of the European Parliament and of the Council of July 23, 2014 on improving securities settlement in the European Union and on central securities depositaries*, being included in the ESMA Central Securities Depositary Register. The authorization confirms that the Central Depositary meets the requirements of CSDR, has an important role in creating a unitary post-trading framework in the European Union by introducing a set of common rules and by simplifying the complexity of the regulation in the European financial market, caused by different national rules.

The new European regulations aim to increase the transparency, security and efficiency of the Central Depositary 's settlement operations and registry services. The improvement of the post-trading infrastructure took place in the context of the classification of BVB as an emerging market by

FTSE Russell in 2019, and starting with the end of September 2020 BVB was promoted by the status of "emerging market", following a decision taken by the FTSE Russell.

At the same time, the Central Depositary is the only institution in Romania authorized to issue LEI[28] codes for legal entities in Romania.

The **Central Depositary** is a fundamental institution of the Romanian capital market, which ensures the infrastructure of the financial market, having the role of operator for the financial instruments settlement system (RoClear) and fulfilling the function of registry for joint stock companies.

The Central Depositary also offers participants a multitude of other related services, being permanently concerned that they be harmonized with European practices, at high standards, with minimal risks and low costs, by:

• **Stability** by ensuring safe and efficient services that facilitate access to the Romanian capital market for both domestic and international investors;

• **Impartiality**, as a guarantee of equal treatment and fair competition between all participants and issuers;

• **Innovation** and **development of the financial market** together with the Bucharest Stock Exchange, the Financial Supervisory Authority, the National Bank of Romania, the Brokers Association, etc.;

• **Development** - increasing the visibility of the Central Depositary.

Table 23 Net local clearing and settlement activity in national currency

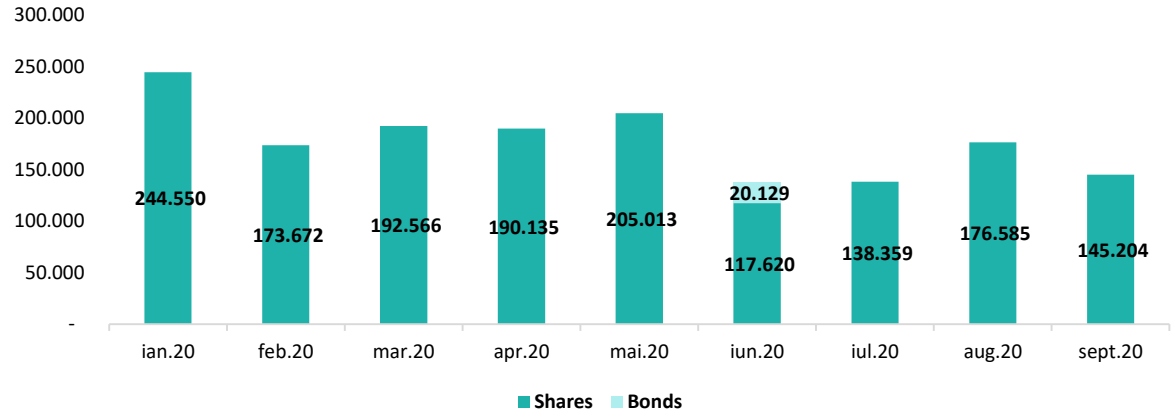
Year	Number of settled transactions	Value of settled transactions (thousand lei) VST	The value of transactions after clearing (thousand lei) VTC	Clearing Ratio (%) =100x(1-VTC/VST)
2020*	679,591	16,558,086.25	3,270,102.23	80.25%
2019	598,986	27,133,713.55	5,541,291.42	79.58%
2018	669,299	28,269,201.66	4,177,188.24	85.22%
2017	1,045,162	31,942,174.32	5,317,097.26	83.35%
2016	1,015,204	24,822,286.01	4,250,144.82	82.88%
2015	1,095,125	26,497,347.64	5,370,408.35	79.73%
2014	1,070,648	18,605,874.87	7,065,873.51	62.02%
2013	902,016	13,787,999.97	6,408,785.38	53.52%
2012	936,613	9,762,948.10	3,308,301.18	66.11%
2011	1,123,195	11,563,021.96	4,370,001.03	62.21%
2010	1,114,257	8,728,071.33	2,032,601.00	76.71%
2009	1,506,052	6,973,808.87	1,712,406.17	75.45%
2008	1,719,301	8,818,206.30	2,238,866.21	74.61%
2007	2,220,388	18,962,303.66	5,204,793.66	72.55%

Source: Central Depositary, * until August 2020

The statistics include all transactions concluded at trading venues, including buy-in and sell-out operations, as well as allocation transactions. The statistics are presented using the single counted principle.

[28] Legal Entity Identifier

Figure 74 Transaction value (RON thousand) for 2020



Source: Central Depository

5.5. Profitability risk of the market operator BSE and the Central Depositary

The Bucharest Stock Exchange and the Central Depositary are critical infrastructure institutions for the Romanian capital market, therefore their financial stability is particularly important in the overall non-bank financial market. The structure and evolution of the main economic and financial indicators of the Bucharest Stock Exchange and of the Central Depositary show a low risk of profitability and solvency.

Bucharest Stock Exchange (BSE)

The financial indicators of the Bucharest Stock Exchange have maintained stable in recent years, and the listing on the regulated market has contributed to an increased transparency together with the application of some principles of good corporate governance. The structure of resources used by BVB remained constant, the own funds representing over 96% of the total assets, the degree of indebtedness being particularly low. The financial results of BSE were positive and registered a slight volatility, with a downward trend in the last three years.

Figure 75 Evolution of turnover and net profit relative to turnover for BSE

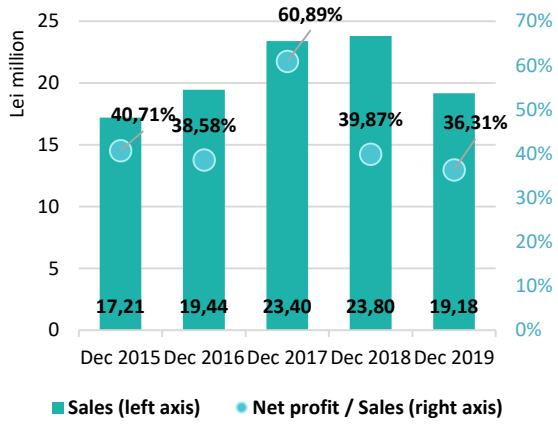


Figure 76 Evolution of the main balance sheet indicators of BSE

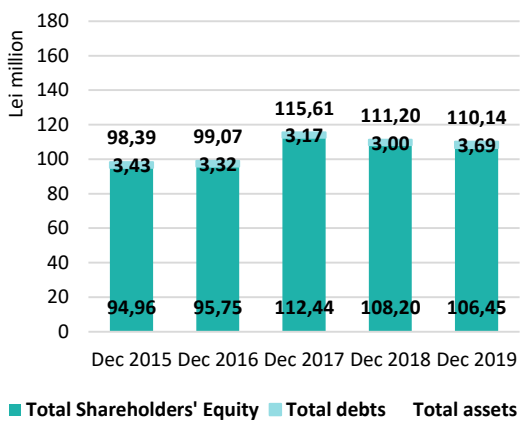


Figure 77 Evolution of BSE's net profit

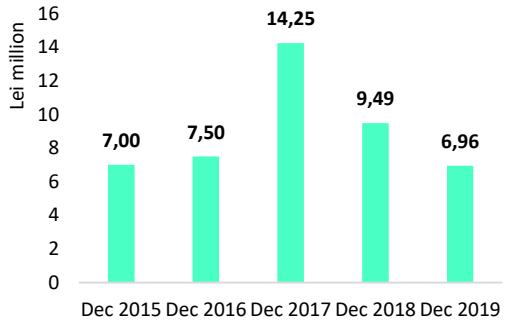
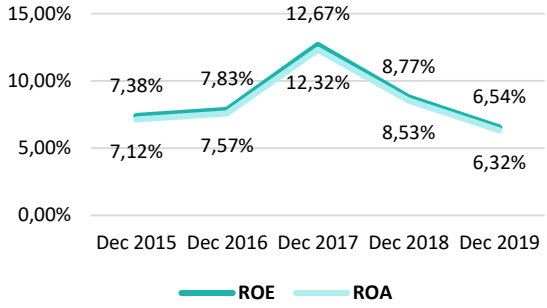


Figure 78 Evolution of BSE profitability indicators



Source: BSE

Central Depositary (DC)

The financial indicators published by the Central Depositary in the last 5 years have shown the maintenance of a sound resilience of its activities. Thus, the company kept a stable structure of financing sources, having a level of own funds between 38% and 41% of the total assets. The Central Depositary was profitable throughout the analyzed period, obtaining an economic return between 1.64% and 2.19% and a return on equity between 4.32% and 7.16%.

Figure 79 Evolution of turnover and net profit relative to turnover for the CD

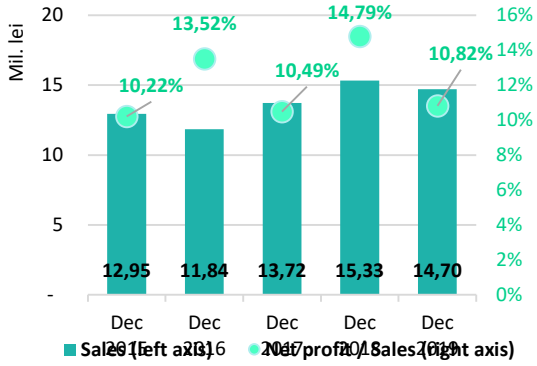


Figure 80 Evolution of the main CD balance indicators

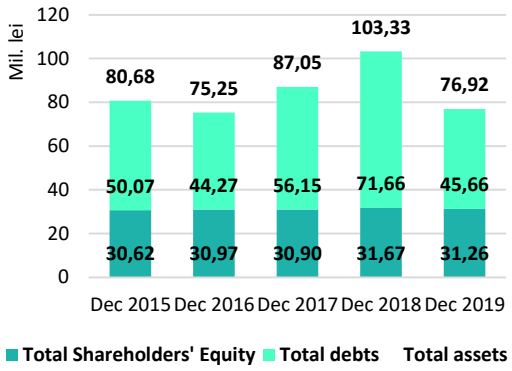


Figure 81 Evolution of DC's net profit

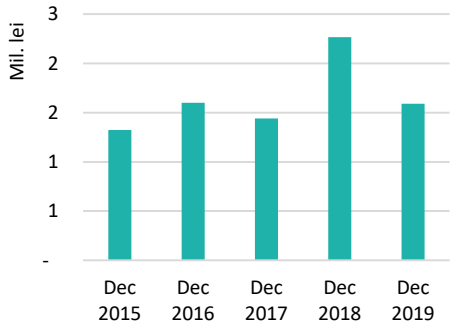
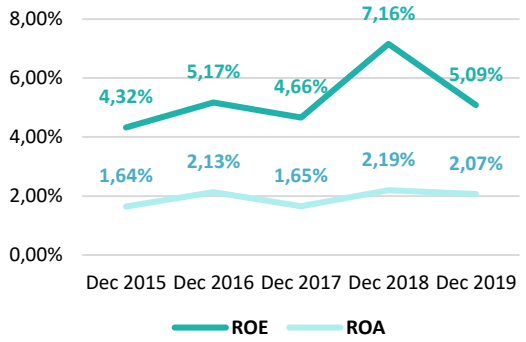


Figure 82 Evolution of DC's profitability indicators



Source: Central Depositary

For the proper functioning of the Romanian capital market, the early identification and management of operational and cyber risks resulting from the development of the activity remain of high importance.

5.6. Potential risks and vulnerabilities on the capital market

The beginning of 2020 was marked by high values of local indices, but due to the rapid increase in volatility in international financial markets, amid the spread of COVID-19 virus, stock indices declined significantly due to contagion effects on financial markets and forecasts of global economic downturn.

The second "lockdown" imposed in many countries has contributed to considerable uncertainty among investors. The level of stress in the European financial system, according to the composite indicator calculated by the European Central Bank, has increased.

In March 2020, trading conditions were negatively impacted by the effects of COVID-19, but since the end of April there has been a revival of international financial markets. However, starting with October, there has been also a deterioration in conditions in the US and Euro area financial markets, according to Bloomberg estimates.

The turbulence index on international stock markets calculated by Bank of America Merrill Lynch increased significantly between September and October, amid concerns about the effects of a new resurgence of COVID-19 infections.

European stock markets reacted negatively on November 18 amid concerns about surging coronavirus cases across the region, which could prevent the economic recovery, even if there were positive developments in the COVID-19 vaccine findings.

The two components of the capital market (stock exchange and collective investment undertakings), due to their specific role and operating conditions, face different sets of risks. Thus, for the *market of collective investment undertakings*, the most relevant are investment risks, credit risk and liquidity risk. Furthermore, they are generally managed adequately throughout the market, by diversifying and complying with the investment policies assumed by the prospectuses. The low complexity of the market means that, for the time being, these risks are not amplified by the use of financial leverage, the complex financial instruments (eg derivatives, structured, bonds resulting in securitization, etc.) not having a significant share in total assets. The high level of concentration of depositary services is high also for the 1st semester of 2020, for the same structural reasons as in the case of pension funds.

For the second component of the *capital market*, the local stock market, market risk and liquidity risk are relevant. The first part of 2020 marks a significantly higher level of volatility on the stock market, compared to 2019, these being determined by the economic effects caused by the COVID-19 pandemic. In March 2020, international stock markets were significantly deteriorated due to the SARS-CoV-2 pandemic, and since April a return can be noticed, the most significant evolution being recorded by stock exchanges in the United States of America. In the local stock market, the high volatility triggered by the SARS-CoV-2 pandemic has started to drop significantly. Currently, the volatility of the Bucharest Stock Exchange indices has decreased, and the regime remains medium to

low for the time being. The COVID-19 pandemic had a direct and strong impact on the local stock market, due to the fear of investors.

Also related to the stock market, the profitability risk of a category of intermediaries on this market (local investment firms - IFs) has been maintained for a long time at a high level, which has contributed to the orderly exit from the market of some entities and to the increase of the concentration degree . The low profitability has not yet had repercussions on the solvency risk for these entities, the level of capitalization being comfortable.

From the perspective of the local stock market, on the whole, the most important risk is that of remaining at a low level of development (from the perspective of capitalization, liquidity, degree of diversification of issuers and financial instruments, etc.), which would have a negative impact on other components of the financial market (eg. insurers, pension funds, collective investment undertakings) and the economy as a whole (limited access to market funding as an alternative to bank financing).

5.7. The impact of the COVID-19 pandemic on the capital market

COVID-19 is changing the paradigm in global and local financial markets, quickly turning into a new risk, generating a feverish behavior among investors and bringing unprecedented challenges for policymakers. The study provides evidence of significant negative effects on the Romanian capital market caused by COVID-19 between March 16, 2020 and September 30, 2020.

Investors are less interested in the potential return, but in the lower risk of some asset classes, such as low-risk government bonds. Even in the case of government securities, there is a selection and a preference for countries with a better rating, even if yields can be negative in some cases.

Given the evolution of assets since the beginning of the pandemic, primarily the fall in prices for the riskiest asset classes, it is important to know and not lose sight of long-term goals. Long-term diversification is important in order to limit risks, while protecting the asset portfolio. However, the evolution in recent months has highlighted the close correlations between some asset classes, which have evolved with a similar pattern.

The research[29] aims at whether the Romanian stock market is affected by the COVID-19 pandemic outbreak. For the exploration of the connections, daily data were used between March 16, 2020 - September 30, 2020 for the following markets: US, Italy, China and Romania. A wide range of variables has been selected to achieve the target, such as stock market indices, the new cases of COVID-19, the number of deaths in China, the USA and Italy. The ARDL (Autoregressive Distributed Lag) model was approached, which allowed the study of the cointegration between variables, respectively the presence of short-term or long-term causal relationships. So far, the number of researches is low, this being among the first analyses that address the impact of COVID-19 in China, US and Italy on the Romanian capital market.

The outbreak of coronavirus (COVID-19) occurred in December 2019 in China, in the city of Wuhan. According to the latest statistics, China is the second largest economy in the world in terms of

[29] The full research can be consulted in the Journal of Financial Studies Vol. V, No. 9, November 2020 -Joldeș, CC (2020), "The impact of COVID-19 on the Romanian capital market: An evaluation of the BET index and of the shares of BRD, SNP, TLV, FP & SNP", Journal of Financial Studies, Vol. V, No. 9

nominal GDP, with an average growth rate of 6% in the last 30 years. In 2019, China's GDP was $ 14.3 trillion, representing over 20% of the world economy. China is listed as the largest producer and largest exporter of goods. It is also the fastest growing consumer market and the second largest importer of goods. China plays a prominent role in international trade and is involved in trade organizations and treaties.

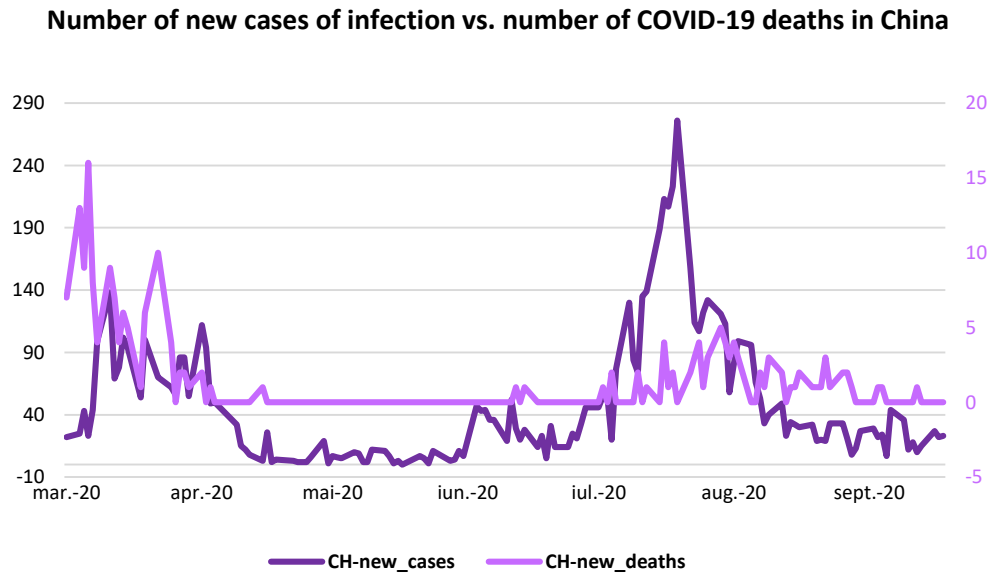
Developments in the capital markets are quite difficult to predict in the current context. Comparison with other financial crises in the past is not feasible, but it can work to a very limited extent, if we only refer to the financial losses generated by the coronavirus. The only certainty at this moment, but also a priority, is the one related to prevention and protection against adverse developments. In times of uncertainty, the volatility of markets increases and, at the same time, the contagion between them, so that the correlation between markets is much closer.

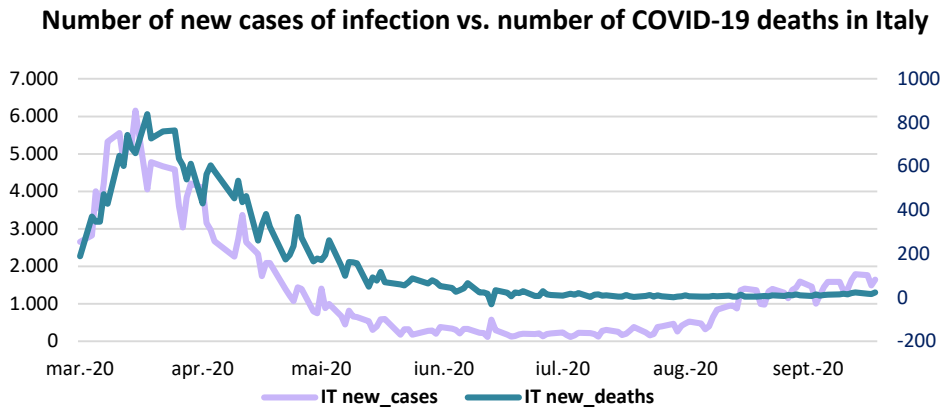
Following the outbreak of COVID-19, there were numerous disruptions in economic activities leading to declining production and consumption. Some economic sectors were more impacted, such as tourism, industry and transport. According to Bloomberg, car sales in China fell by 20% in January 2020. China has said it will take steps to stabilize the economy by controlling the virus and providing measures such as domestic tax cuts.

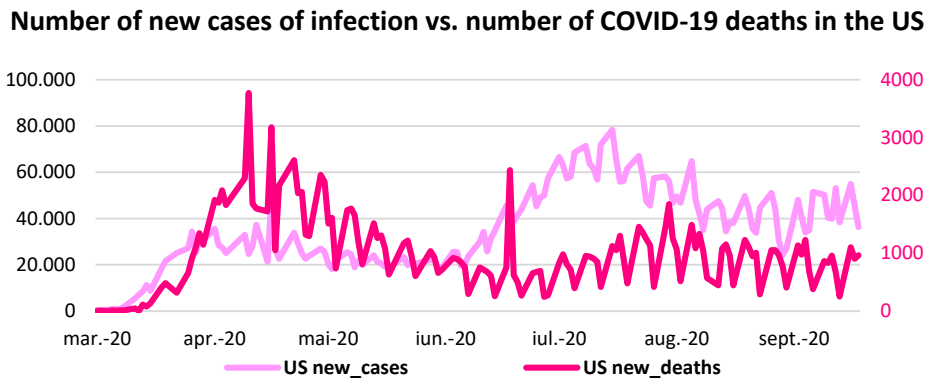
It is worth to specify two economic phenomena, namely: interest rates, which are much lower than in the 2008 scenarios, the result being that of exaggerated stimulation of the economic growth; and globalization and integration of trade flows, which are much higher now than 10-20 years ago. Any disruption can disturb the global economy with a much greater impact.

The figure below shows the evolution of the number of new cases due to COVID-19, as well as the progress of the number of new deaths caused by COVID-19. It can be noticed that the US records the highest figures, both in terms of new cases and the number of new deaths reported. Italy ranks second, with the number of new deaths being slightly lower than in the US. Although the epicenter of the COVID-19 pandemic began in China, it is noted that the number of patients and deaths is significantly lower than in the US and Italy.

Figure 83 Evolution of the number of new cases of infection and of the number of COVID-19 deaths





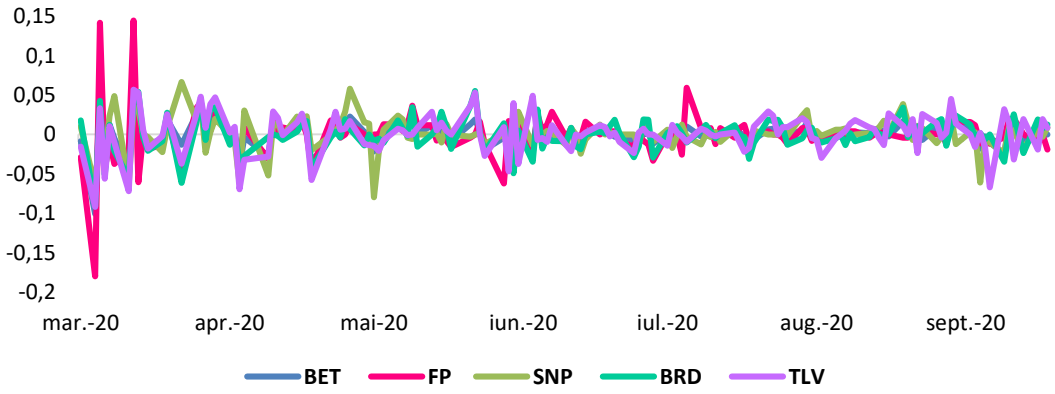


Source: Joldes (2020)

The figure below shows the evolution of the BET index, as well as of the most traded shares from BVB in the period explored. Significant volatility is consolidated, especially for Fondul Proprietatea during March 2020. International stock markets reacted violently, with the highest volatility being observed in March, when all the world's economies began to impose restrictions in order to reduce the spread of the virus, these measures impacting negatively the evolutions of the stock market indices at global level, being also influenced by investors' feeling of fear.

In the first part of 2020, the Bucharest Stock Exchange, represented by the BET index (-13.21%), registered some of the lowest decreases compared to other emerging markets in the area (eg Poland WIG: -14, 25%, Hungary BUX: -22.27% and Greece ASE: -30.30%) and even to some developed markets (France CAC40: -17.43%, United Kingdom FTSE100: -18.20% and USA DJIA : -9.55%).

Figure 84 Evolution of the profitability of BVB indices



Source: Joldes (2020)

There are high negative correlations between the number of new cases of infections and deaths caused by COVID-19 and the BET index, respectively the four selected shares. In the case of the BET stock index, it shows strong negative correlations with the number of COVID-19 deaths in China and with the number of new cases of infections and deaths due to COVID-19 in Italy. FP and TLV shares are strongly positively correlated with the number of new cases of infections and COVID-19 deaths in Italy, and SNP is strongly correlated with the number of COVID-19 deaths in Italy and China. Of the four shares, BRD has significantly lower correlations with COVID-19 specific variables.

Table 24 Correlation matrix of the analyzed variables

		1	2	3	4	5	6	7	8	9	10	11
1	**BET**	1	0.67	0.87	0.82	0.93	-0.19	-0.58	-0.69	-0.81	0.47	0.03
2	**BRD**	0.67	1	0.57	0.45	0.72	-0.17	-0.22	-0.18	-0.37	0.09	-0.13
3	**FP**	0.87	0.57	1	0.57	0.77	-0.05	-0.47	-0.62	-0.76	0.49	-0.05
4	**SNP**	0.82	0.45	0.57	1	0.73	-0.42	-0.57	-0.47	-0.53	0.17	0.2
5	**TLV**	0.93	0.72	0.77	0.73	1	-0.16	-0.43	-0.52	-0.73	0.46	-0.03
6	**CH_NEW_CASES**	-0.19	-0.17	-0.05	-0.42	-0.16	1	0.25	0.07	0.05	0.45	-0.14
7	**CH_NEW_DEATHS**	-0.58	-0.22	-0.47	-0.57	-0.43	0.25	1	0.54	0.4	-0.33	-0.4
8	**IT_NEW_CASES**	-0.69	-0.18	-0.62	-0.47	-0.52	0.07	0.54	1	0.88	-0.54	-0.15
9	**IT_NEW_DEATHS**	-0.81	-0.37	-0.76	-0.53	-0.73	0.05	0.4	0.88	1	-0.55	0.05
10	**US_NEW_CASES**	0.47	0.09	0.49	0.17	0.46	0.45	-0.33	-0.54	-0.55	1	0.1
11	**US_NEW_DEATHS**	0.03	-0.13	-0.05	0.2	-0.03	-0.14	-0.4	-0.15	0.05	0.1	1

Source: Joldes (2020)

Empirical results from ARDL models confirmed both short-term (in most of the studied models) and long-term negative relationships (only in the case of SNP there were negative long-term relationships identified from the number of new cases of infection in China on the evolution of the share). Thus, the study suggests that the negative reaction of the Romanian capital market was strong in the first days of confirmed infections / declared deaths caused by COVID-19.

Unidirectional causal relations are established between the variables COVID-19 (China, Italy and USA) and the stock market index BET and FP: from the number of COVID-19 deaths to BET / FP, from the number of new infections from Italy to BET / FP and from the number of deaths in the US to BET / FP. OMV Petrom presents Granger-type causal relationships only with COVID-19 variables from China and the USA. Both the number of COVID-19 deaths in China and the US cause Granger evolution for SNP shares. No variable representing the evolution of the COVID-19 epidemic in China, Italy and the US has any causality on BRD and TLV.

The empirical results of the study indicate that stock market indices, respectively shares traded on the Bucharest Stock Exchange, respond quickly to COVID-19 and the reaction varies over time, depending on the stage of the pandemic. The research results provide many suggestions to investors in optimizing their portfolios and provide guidance for policy makers and regulators. In this COVID-19 stage, not only the international stock markets, but also the foreign exchange markets registered extremely volatile days. With the exception of periods of high volatility, average stock market liquidity is declining in the second half of the year, the first impacted markets being border or emerging markets, including the local capital market, investors preferring developed markets or less risky assets, such as government bonds or gold.

These developments are forcing market participants (especially banks) to reduce their risk-taking capacity and to diminish their growth in both financial markets and global economies. To prevent these actions, policymakers should continue to provide liquidity to international markets, as illustrated by recent global swap operations made by US Federal Reserve.

6. Stability of the insurance market

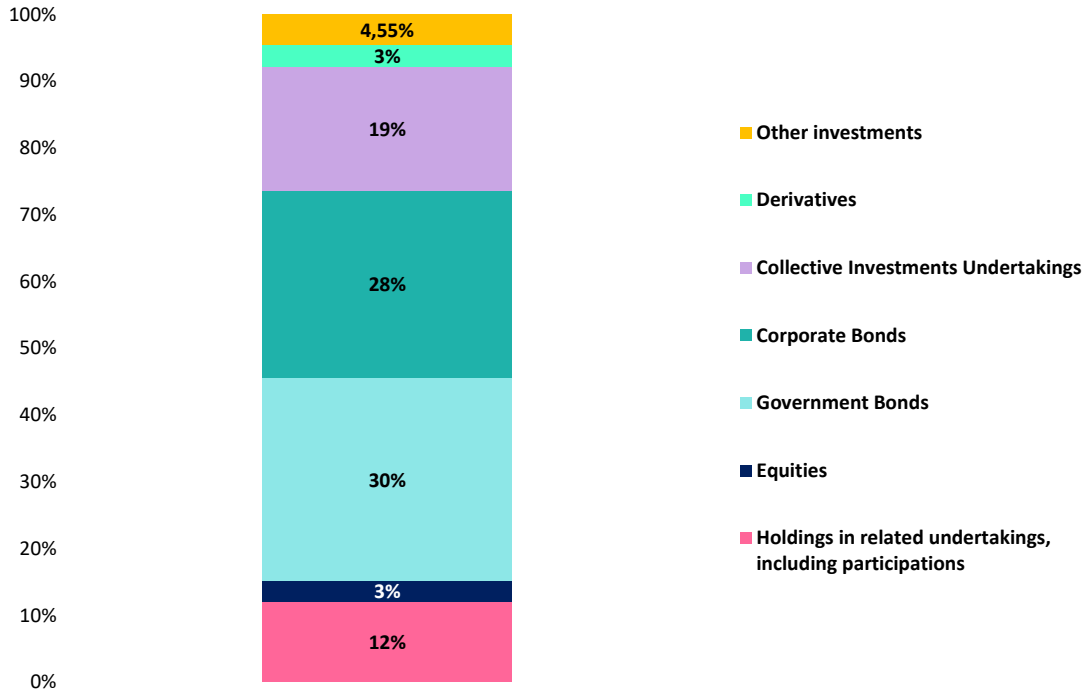
In the first 6 months of 2020, the insurance market in Romania generally had a positive dynamic, without extreme fluctuations that might threaten the financial stability and induce the rise of specific risks, in the context of a high degree of uncertainty due to the COVID-19 shock. The market had a growing trend in terms of gross written premiums, and the its structure remained strongly dominated by non-life insurance and especially motor insurance. The degree of concentration (by insurance classes, but also for insurance companies) and the degree of intermediation remained at high levels. Also, at market level, the combined ratio (cost and risk indicator on profitability) remained high for the main insurance classes (A3 and A10), but decreased compared to the same period last year. Health insurance, although still holding a relatively small share in the total volume of gross written premiums, continued the positive dynamics noted during the previous years, being in the first 6 months of 2020 at the highest half-yearly values recorded.

6.1. The European insurance market

The COVID-19 crisis overlapped with a European economic environment characterized by low yields and a high level of uncertainty, which led to an intensification of these vulnerabilities from the perspective of insurance companies. In this context, the high degree of uncertainty and the current challenges have increased the risks of prolonged ultra-low interest rates and the sudden reassessment of risk premia which it has amplified the risk of solvency, profitability and reinvestment for insurance companies. A sudden reassessment of risk premia can lead to a decrease in the value of insurers' investment portfolios. Ultra-low interest rates, higher risk premia and the potential increase of the liquidity buffers, in the context of an increase in claims and redemptions values could rise the risk of inefficient asset allocation, in the sense that the assets do not match the liability. In addition, uncertainty about capital markets could also expand the risk that asset allocations will be ineffective.

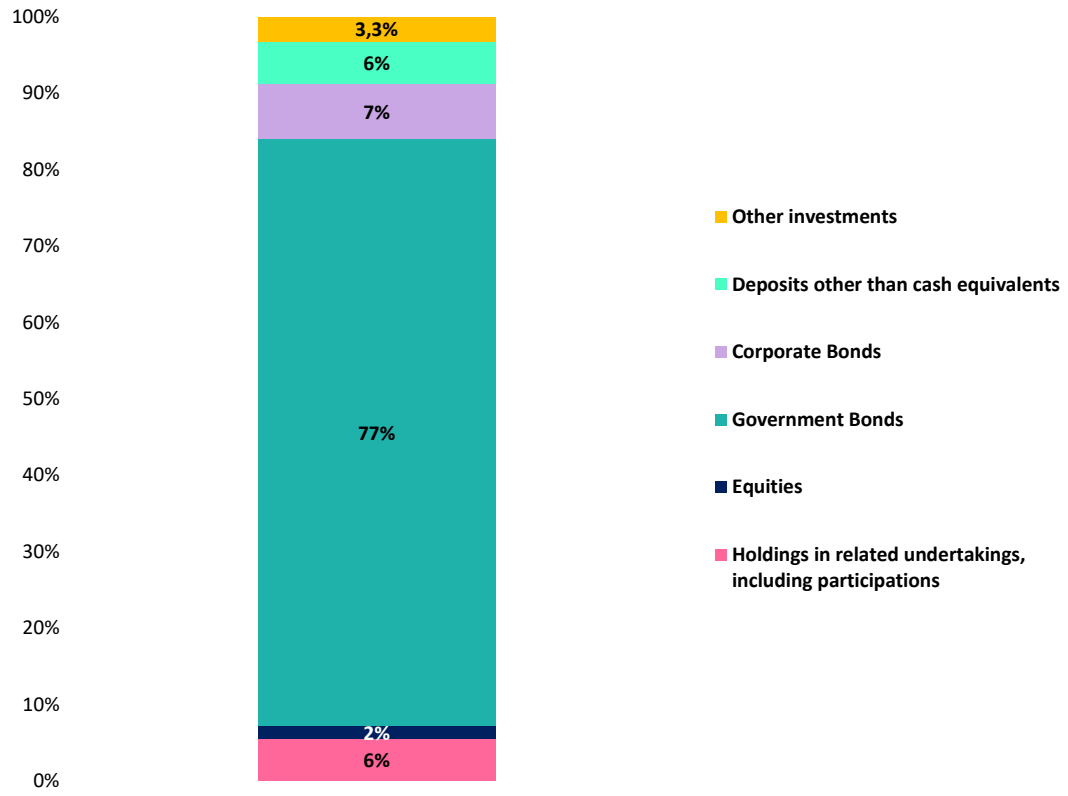
It can be seen that the portfolios of insurance companies both at EEA level and in Romania are mainly oriented towards investments in bonds. Unlike the investment structure of EEA insurers, in Romania government bonds have a much higher share (77%).

Figure 85 Aggregate investment structure of insurance companies in Europe (Quarter II 2020, 31 countries)



Source: EIOPA, FSA calculations

Figure 86 Aggregate investment structure of insurance companies in Romania (Quarter II 2020)

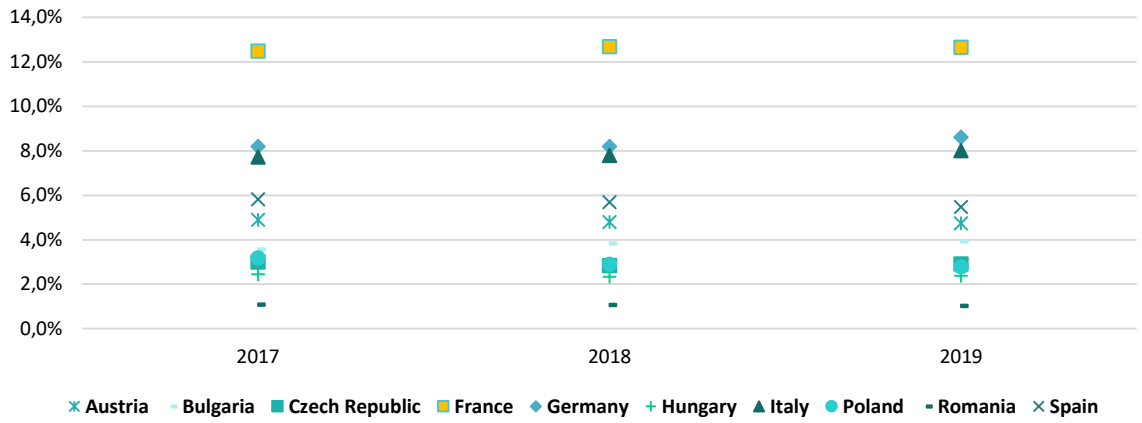


Source: EIOPA, FSA calculations

The insurance penetration rate in the GDP, an indicator calculated as the ratio between the value of gross written premiums reported to EIOPA and the gross domestic product (GDP), registered significant values for France during the analyzed period. As shown in the chart below, in 2019, France (12.7%) recorded the highest value, followed by Germany (8.6%), Italy (8.0%) and Spain (5, 5%). In the case of Romania, there is a constant trend regarding the degree of insurance penetration in GDP, in 2019 its value was about 1.0%.

Although the value of gross written premiums in Romania increased significantly in 2019 compared to the previous year, the insurance penetration rate in the GDP dropped slightly due to the faster growth of GDP compared to the rise of the insurance sector.

Figure 87 Insurance penetration rate in the GDP

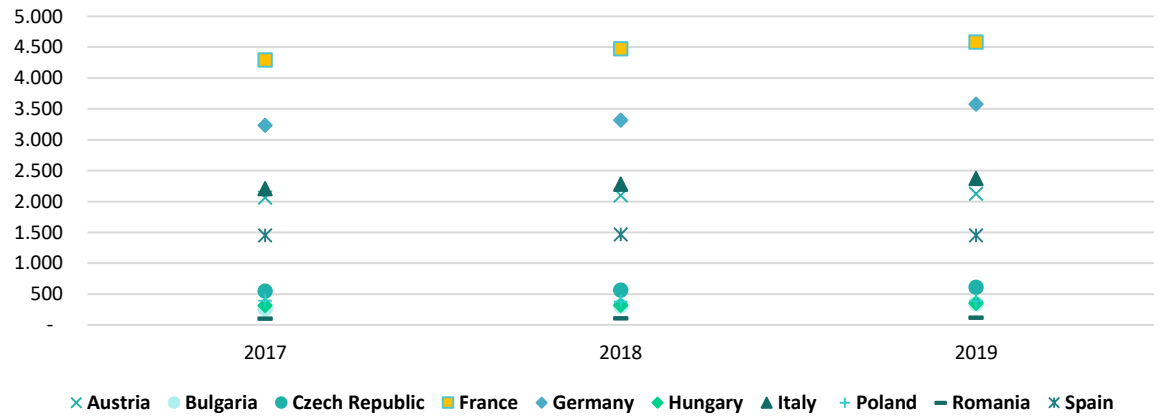


The density of insurance, calculated as the ratio between the value of gross premiums written on the territory of a state and the number of its inhabitants, is an indicator that shows how much an inhabitant of a country spends, on average, on insurance products.

In 2019, France also ranked the first position with regard to this indicator (EUR 4,584 / inhabitant), being followed by Germany (EUR 3,582 / inhabitant), Italy (EUR 2,377 / inhabitant) and Austria (EUR 2,126 / inhabitant).

In the case of Romania, in 2019, the insurance density was at a value of EUR 118 / inhabitant, rising by about 6% compared to the previous year.

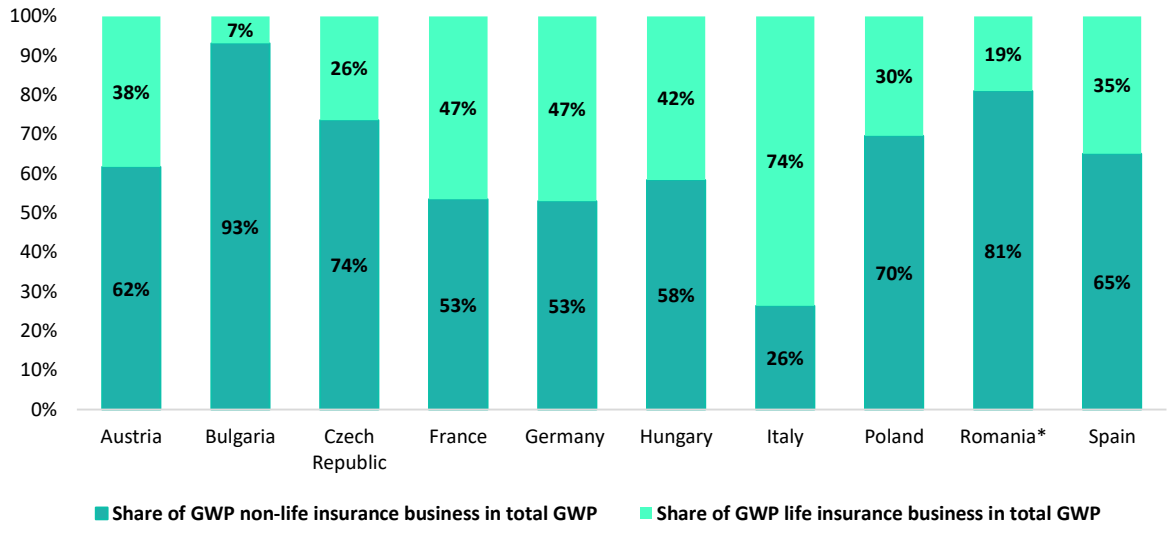
Figure 88 Insurance density (EUR)



Source: EIOPA, Eurostat, FSA calculations

The share of life insurance business in the total insurance sector in Romania in terms of the volume of gross written premiums is at a low level compared to the other analyzed EU states. However, the life insurance sector in Romania has risen significantly in recent years, which indicates a growing trend of Romanians' interest in life insurance products.

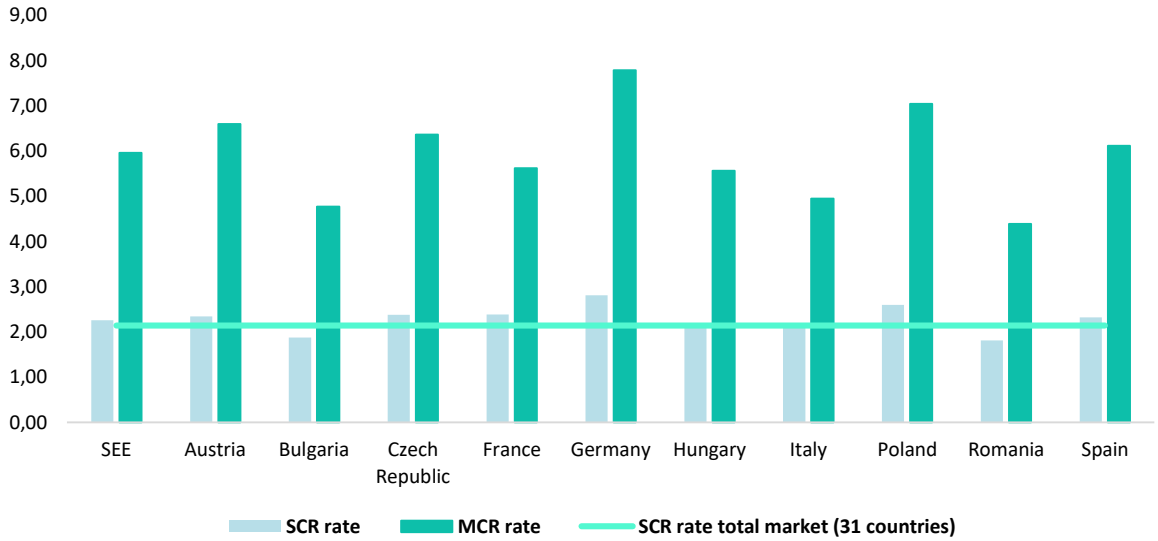
Figure 89 The structure of the insurance market according to the gross written premiums for the non-life and life insurance business (2nd Quarter 2020)



Source: EIOPA, *FSA calculations

Regarding the solvency of the European insurance market, according to published statistics, the SCR rate at the insurance market level in the 31 countries reporting to EIOPA stood at 2.14 in the second quarter of 2020, and the median SCR rate was 2.12.

Figure 90 Solvency Capital Requirement (SCR) and Minimum Capital Requirement (MCR) rates (2nd Quarter of 2020)



Source: EIOPA

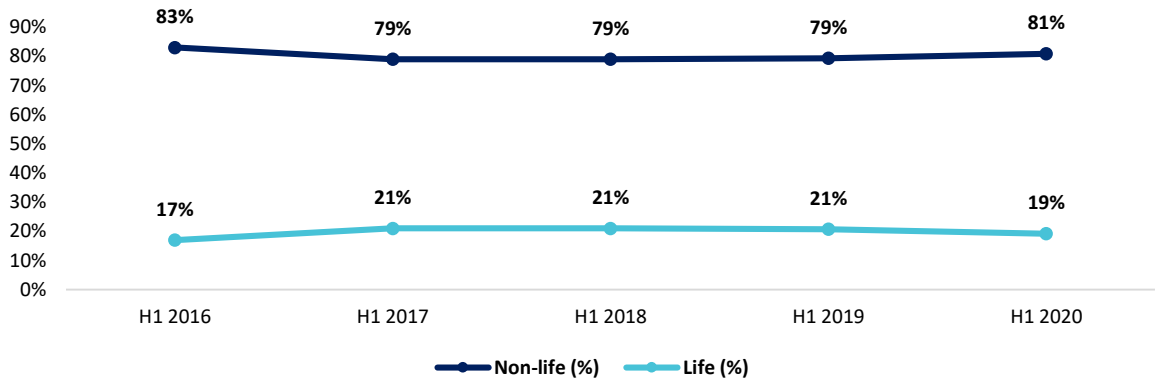
Although Romania has registered lower levels of these indicators compared to the European average, the growing perspectives of this sector remain favorable. The launch of new insurance products and their adjustment to population's needs, the increase of consumers' confidence in the insurance industry and the rise of financial education remain efficient ways to consolidate the insurance sector in Romania.

6.2. Recent developments in the insurance market

The Romanian insurance market had a positive evolution in the first 6 months of 2020, with an increase of approximately 3.4% of gross written premiums (GWP) for both categories of insurance, non-life and life, compared to the value recorded in the same period of the previous year. The volume of gross written premiums stood at approximately Lei 5.6 billion on June 30, 2020, of which 81% (approximately Lei 4.5 billion) represent gross written premiums for the non-life insurance business.

The value of gross written premiums for the non-life insurance business rose by 5.4% in the first half of 2020 compared to the first half of the previous year, while the value of the underwritings for the life insurance business registered a drop of 4.2%.

Figure 91 Evolution of the share of the non-life insurance and life insurance business in the total gross written premiums



Source: FSA

Insurance companies authorized in other EU member states subscribed in the first half of 2020 under the freedom of establishment (FOE), on the territory of Romania, through branches, a total of gross written premiums of over Lei 505 million, increasing by 11% compared to the same period of the previous year.

In the first half of 2020, insurance companies reported gross paid claims (including maturity and partial and total redemptions), cumulated for the two categories of insurance, amounting to approximately Lei 3.35 billion, increasing by about 1.45% compared to the same period of the previous year, as follows:

- Lei 2.85 billion are related to non-life insurance contracts, an increase of 2.7% compared to the first semester of 2019;

- Lei 499 million represent amounts paid for gross claims, maturities and partial and total redemptions related to life insurance, a drop of about 5% compared to the same period of the previous year.

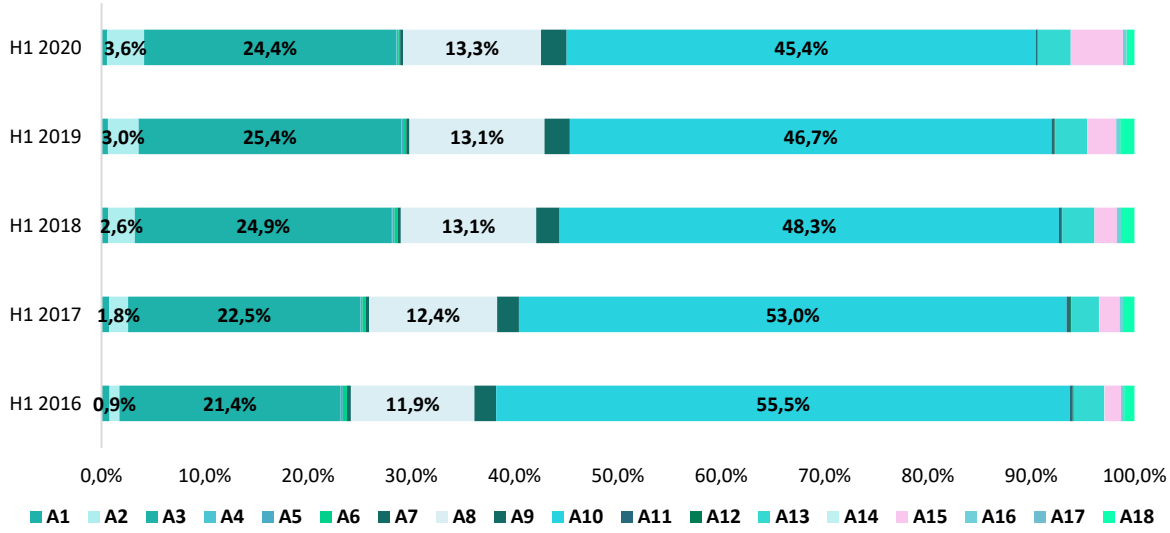
In the first half of 2020, the branches reported gross paid claims, cumulated for the two categories of insurance, in the amount of about Lei 155 million, rising by 11.9% compared to the first half of 2019.

6.3. Market diversification degree

Unlike the European insurance market where the life insurance segment is better represented, in Romania it still has a lower share, about 19% of the gross written premiums, the market being dominated by non-life insurance, respectively motor insurance.

Compared to the period 2017-2019, there is a decrease in the share of life insurance business in the first half of 2020, as a result of the reduction in the volume of gross written premiums for this segment, respectively the increase in underwritings in the case of non-life insurance.

Figure 92 Share of gross written premiums by insurance classes in total gross written premiums for non-life insurance business

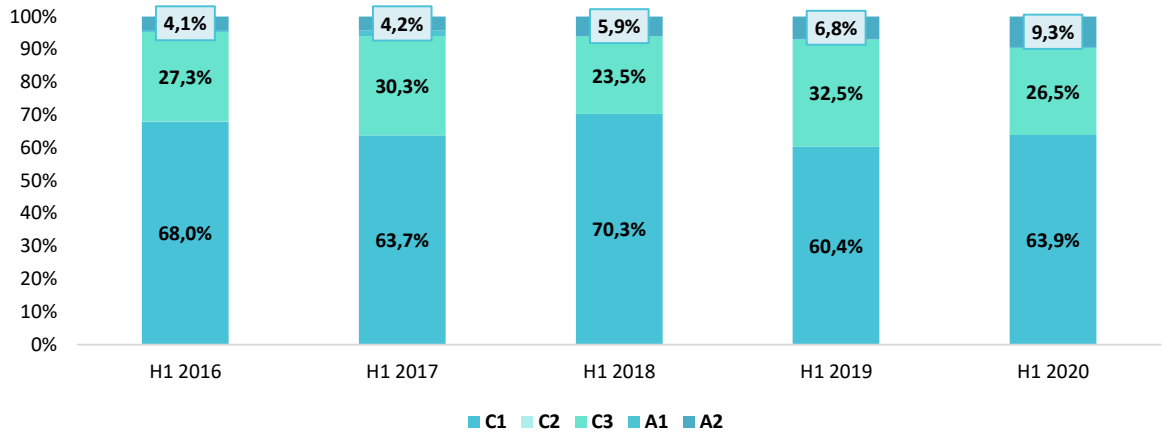


Source: FSA

By non-life insurance classes there is a concentration of insurance activity in Romania, due to the high interest in motor insurance (classes A3 and A10) in the first half of 2020. Compared to the first half of 2016, when the share of the motor insurance segment had the highest value in the analyzed period, of about 77%, there is a slight decrease in recent years, currently standing at a value of about 70% of the total gross premiums written for non-life insurance business.

A changing trend on the insurance market in recent years is the consolidation of the health insurance segment. The increase of the share of this insurance class in terms of the volume of gross written premiums for both non-life insurance and life insurance, indicates a greater diversification on the Romanian insurance market.

Figure 93 Share of gross written premiums by insurance classes in total gross written premiums (Life Insurance)



Source: FSA

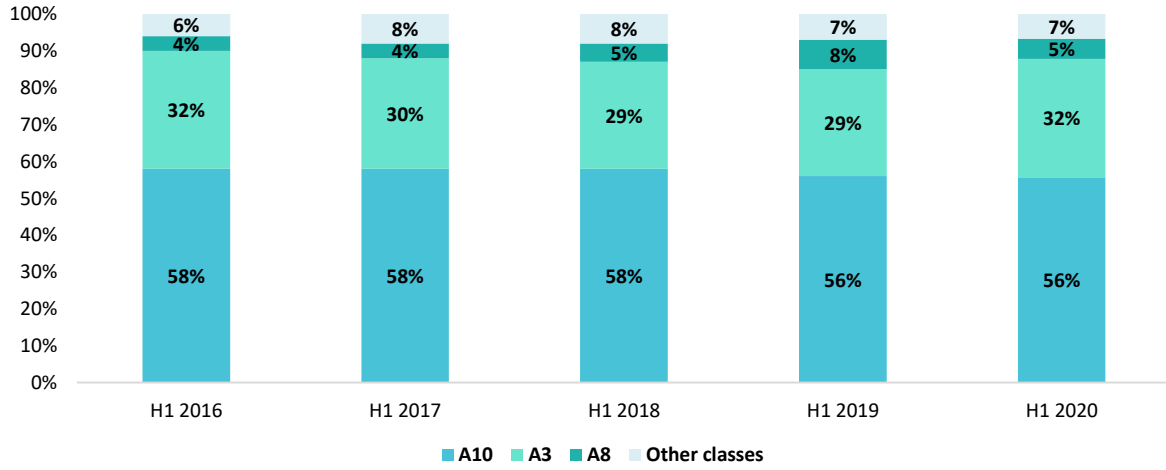
In the case of life insurance, the concentration degree by insurance classes remains high, class C1, Life insurance, annuities and additional life insurance, accumulating about 64% of the volume of gross written premiums for the life insurance business.

6.4. Claims rate

In the first half of 2020 there was an increase in gross claims paid (excluding maturities and partial and total redemptions) by insurance companies, up to the amount of Lei 2,957,428,492, of which 96% are related to non-life insurance contracts (up by 2.7% compared to the first half of 2019), and the remaining about 4% representing gross claims of life insurances (whose growth rate was 2.3% compared to the similar period of the previous year).

Maturities, partial and total redemptions are added to the gross claims of life insurance, all reaching the value of Lei 392,044,962, a downward trend compared to the same period of the previous year (Lei 421,105,243).

Figure 94 Dynamics of the structure by classes of gross claims paid (Non-life insurance)



Source: FSA

In the first half of 2020, the largest shares in the gross claims paid for life insurance (including maturity and partial and total redemptions), in the total amount of Lei 464,544,447, were held by insurance class C1 (Life insurance, annuities and supplementary life insurance) and class C3 (life and annuities, linked to investment funds).

6.5. Technical provisions

The technical provisions of local insurers rose in the first half of 2020, mainly as a result of the positive trend in underwriting. At the end of June 2020, the insurance companies had established gross technical provisions in the total amount of Lei 17,913,491,294, rising by 1% compared to the end of 2019 (Lei 17,799,674,719), distributed on the two insurance categories as follows:

- the gross technical provisions constituted for non-life insurances registered a volume of Lei 9,934,424,576, representing 55% of the total technical provisions. In their structure, the premium provisions (40.71%) and reported but not settled reserves (39.83%) continue to dominate, followed by the reserves for gross incurred but not reported reserves (15.08%);
- for life insurance, the companies established reserves amounting to Lei 7,979,066,718 lei, a level corresponding to a share of 45% of the total technical provisions. The mathematical provision accounts for over 86% of the total technical provisions set up for life insurance. The technical provisions related to class C1, Life insurance, annuities and supplementary life insurance and those related to class C3, Life insurance and annuities, linked to investment funds, represent approximately 97.4% of the total.

Table 25 Structure of gross technical reserves for non-life insurance on June 30, 2020

	30.06.2020	Total share	A10	A3	A8	Significant classes share
	lei	(%)	lei	lei	lei	(%)
Premium reserve	4,044,655,929	40.71%	1,415,318,606	1,155,189,717	605,823,980	78.53%
Reported but not settled reserves	3,957,270,194	39.83%	2,527,904,676	524,698,792	298,189,254	84.67%
Incured but not reported reserves	1,497,878,888	15.08%	1,212,691,999	88,192,383	66,942,313	91.32%
Other technical provisions	434,619,565	4.37%	44,060,468	101,452,646	204,724,539	80.58%
Non-life insurance total technical provisions	**9,934,424,576**	**100.00%**	**5,199,975,749**	**1,869,533,538**	**1,175,680,086**	**83.00%**

Source: FSA

Table 26 Structure of gross technical reserves for life insurance on June 30, 2020

	June 30, 2020 (lei)	Total share (%)
Premium provision	678,388,739	8.50%
Mathematical provision	6,907,796,985	86.57%
Benefits and discounts reserve	117,115,844	1.47%
Other technical provisions	275,765,150	3.46%
Life insurance total technical provisions	**7,979,066,718**	**100.00%**

Source: FSA

Under the Solvency II framework, in force in all EU Member States as of January 1, 2016, the technical provisions of insurers are calculated taking into account all available information, including actuarial estimates of the frequency and severity of damages.

6.6. Reinsurance

For a significant part of non-life insurance products (eg catastrophe insurance, civil liability insurance), as part of their own risk management strategy, insurers frequently resort to various forms of reinsurance ceding contracts, thus limiting the maximum claim incurred in case of insured events with significant financial impact.

Thus, reinsurance programs are a tool for limiting / mitigating the insurers' risk exposure, reducing the capital requirement and improving solvency. In order to do this, the insurers transfer to the reinsurance companies a part of their gross written premiums and of the constituted reserves, receiving a part of the claim paid in case of the insured risks. Therefore, the scope of reinsurance programs is often measured by gross written premiums, provisions and claims paid.

At the end of the first half of 2020, approximately 40% of the gross written premiums for the non-life insurance business were ceded to reinsurance, the level being slightly higher compared to 2019 (38%), which shows a relatively similar level of reinsurance policies by local companies.

Table 27 Evolution of GWP and net reinsurance premiums for the period 2016-2020 for non-life insurance

Period	GWP (lei)	Net reinsurance premiums (lei)	Withholding degree	Reinsurance ceding degree (%)
1st half of 2016	3,884,393,309	2,650,490,131	68.23%	31.77%
1st half of 2017	3,972,468,843	2,438,845,472	61.39%	38.61%
1st half of 2018	3,969,664,621	2,514,401,879	63.34%	36.66%
1st half of 2019	4,313,973,719	2,689,109,186	62.33%	37.67%
1st half of 2020	4,548,799,278	2,731,534,219	60.05%	39.95%

Source: FSA

As a result of the protection they received through reinsurance treaties, a similar percentage of the total gross claims paid for the non-life insurance business, of about 42%, were recovered by local companies from reinsurers during the first half of 2020.

Table 28 Evolution of GCP and net reinsurance GCP for the period 2016-2020 for non-life insurance

Period	GCP (lei)	Net reinsurance claims (lei)	Withholding degree	Reinsurance ceding degree
1st half of 2016	1,802,510,098	1,274,419,628	70.70%	29.30%
1st half of 2017	1,958,217,305	1,221,667,035	62.39%	37.61%
1st half of 2018	2,346,346,150	1,428,908,461	60.90%	39.10%
1st half of 2019	2,775,706,367	1,589,365,149	57.26%	42.74%
1st half of 2020	2,850,159,712	1,658,111,866	58.18%	41.82%

Source: FSA

At the same time, approximately 42% of the gross technical provisions established for the non-life insurance business, were related to reinsurance ceding, at the end of June 2020.

Traditionally, the reinsurance policy differs between life insurance and non-life insurance business. In the case of life insurance, insurance companies generally take on a much larger share of the underwriting risk.

Due to the fact that insurance premiums are generally anticipated and the claims, in case of occurrence of the insured event, are established by contract for each event, therefore more

predictable, life insurance companies do not resort to reinsurance ceding as often as non-life insurance companies.

Table 29 Evolution of GWP and net reinsurance premiums for the period 2016-2020 for life insurance

Period	Gross Written Premiuns (lei)	Net reinsurance premiums (lei)	Withholding degree	Reinsurance ceding degree
1st half of 2016	784,920,172	753,584,338	96.01%	3.99%
1st half of 2017	1,071,185,386	1,026,519,499	95.83%	4.17%
1st half of 2018	1,074,855,170	1,063,225,582	98.92%	1.08%
1st half of 2019	1,124,790,989	1,052,918,739	93.61%	6.39%
1st half of 2020	1,077,379,258	990,576,101	91.94%	8.06%

Source: FSA

Table 30 Evolution of GCP and net reinsurance GCP for the period 2016-2020 for life insurance

Period	GCP (lei)	Net reinsurance claims (lei)	Withholding degree	Reinsurance ceding degree
1st half of 2016	74,940,917	66,778,771	89.11%	10.89%
1st half of 2017	74,656,797	66,830,483	89.52%	10.48%
1st half of 2018	89,824,583	75,418,795	83.96%	16.04%
1st half of 2019	104,879,381	91,787,588	87.52%	12.48%
1st half of 2020	107,268,780	93,767,946	87.41%	12.59%

Source: FSA

6.7. Liquidity of insurance companies

The rationale for prudential liquidity requirements for insurers is that they must be able to mobilize on time the financial resources needed to pay the claims, for which there are generally mandatory (relatively short) time limits required by applicable law.

The liquidity ratio is determined as the ratio between the legal liquid assets and insurers' short-term liabilities towards the policyholders. According to prudential requirements, its value must be above 1. Traditionally, liquidity is much higher for life insurance activities where risks are easier to model and have fewer structural changes over time (mortality table values are generally stable in the short and medium term and changes in the long term are gradual). Therefore, it is generally unlikely that life insurance companies with an adequate level of reserves and solvency will face liquidity problems.

However, the level of liquidity is very relevant in the case of non-life insurance companies, where the duration of inflows (premiums collected) and outflows (possible claims paid) is generally about 1-2 years, risks are more difficult to model, and claims that are to be paid are more difficult to estimate. Under these conditions, both the structure of investments and the liquidity and volatility of the market are relevant to the ability of companies to dispose in a timely manner of the amounts necessary to pay on time and at fair value the compensation for reported claims.

Given the above-mentioned purpose of the liquidity reserve, it must be made up of high-quality assets with an active, liquid and transparent market. The structure of assets held for liquidity purposes (according to the applicable legal provisions) by local insurers is presented in the table below and is dominated by investments in government securities.

Table 31 Liquidity ratio for each of the insurance categories as at June 30, 2020

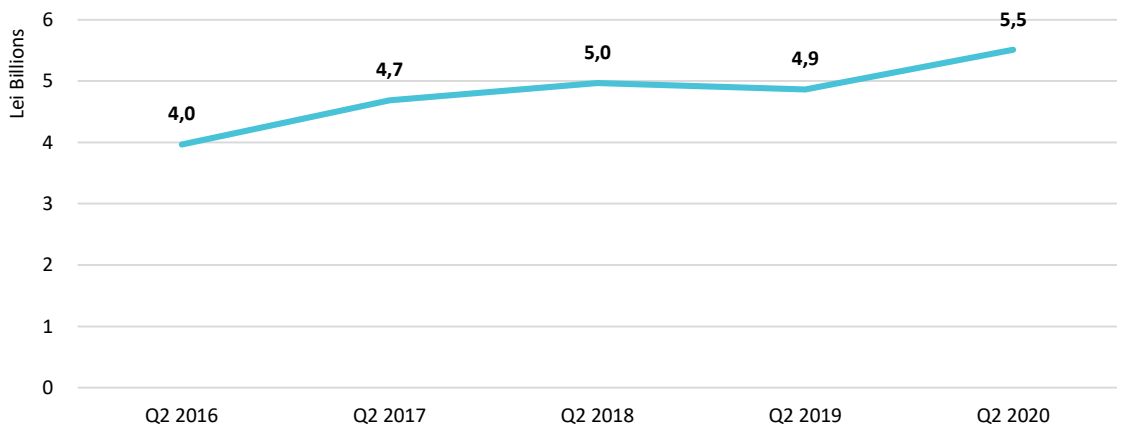
	Government securities (mil. lei)	Municipal bonds (mil. lei)	Traded securities (mil. lei)	Deposits (mil. lei)	Current account and cash (mil. lei)	Short-term obligations (mil. lei)	Liquidity ratio
Non-life insurance	4,971	26	358	547	861	2,884	2.35
Life insurance	4,071	61	1,359	229	216	1,331	4.46

Source: FSA

6.8. Solvency of insurance companies

The Solvency II regime aims to establish a single set of rules at European level applicable to all insurers, reinsurers and supervisors in the European internal market. The legal framework has as main objective to increase the protection of the policyholders by the convergence of the regulation and supervision of the insurance market, in order to boost the contribution to the economic development.

Figure 95 Evolution of the excess of assets over liabilities (billion lei) of insurance companies



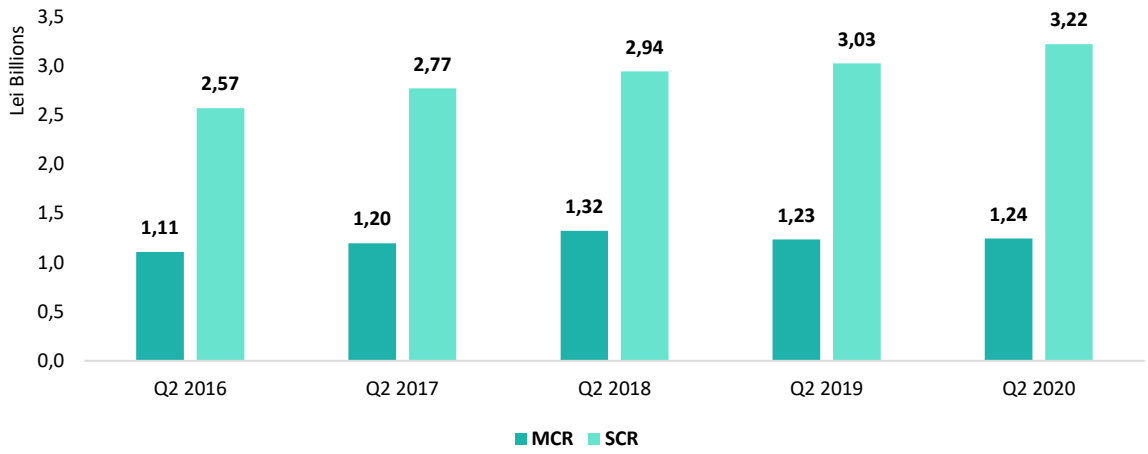
Source: FSA

The excess of assets over liabilities was approximately Lei 5.5 billion on June 30, 2020, up by 13% from the value recorded at the end of the second quarter of the previous year, the highest level since 2016 (the first year of implementation of the Solvency II regime).

The Solvency Capital Requirements (SCR) calculated under the Solvency II regime varied in the second quarter for the period 2016-2020 between Lei 2.57 billion and Lei 3.22 billion, rising over time due to the risks to which the insurance companies are exposed. A comparative analysis between the situation recorded on June 30, 2020 and the one existing on June 30, 2019 underlines an increase in the Solvency Capital Requirement (SCR) of approximately 6.5%.

However, it can be seen that in the insurance market the excess of assets over liabilities (own funds of insurance companies) have had, since the first year of implementation of the Solvency II framework, values to cover the legal capital requirements , revealing the financial stability of the insurance system.

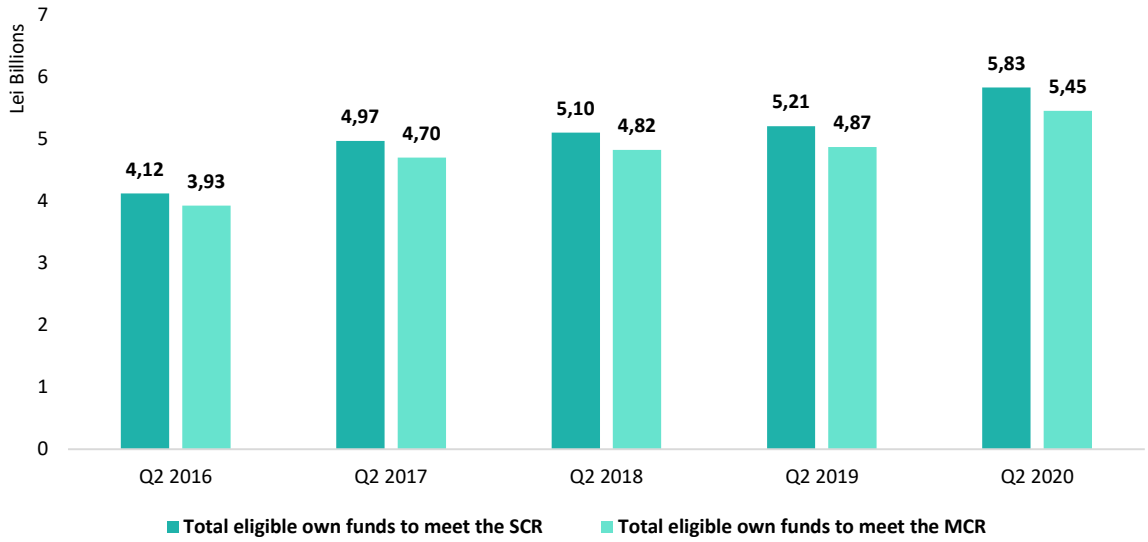
Figure 96 Evolution of the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR)



Source: FSA

The value of own funds eligible to cover the solvency capital requirement was Lei 5.83 billion at the end of the second quarter of 2020, rising by 12% from the same period of the previous year and higher by about 41% compared to June 30, 2016.

Figure 97 Evolution of own funds eligible to cover the solvency capital requirement, respectively the minimum capital requirement

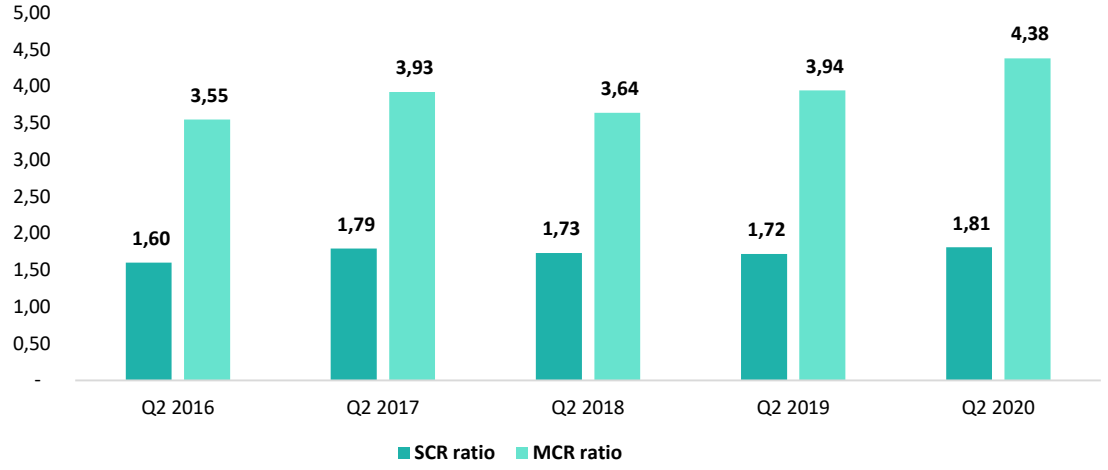


Source: FSA

The aggregate value of the own funds eligible to cover SCR is formed by summing the own funds of the company classified on the 3 ranks defined by the Solvency 2 regime according to quality criteria.

In the entire market, the SCR and MCR rates were over-unitary both at the end of the second quarter of 2020 as well as during the period from 2016 to 2019. Compared to the similar period of the previous year, on June 30, 2020, both the SCR rate at the market level and the MCR rate at the level of the whole market increased by approximately 11% and 5%, respectively, as shown in the following figure.

Figure 98 SCR and MCR rates at the market level



Source: FSA

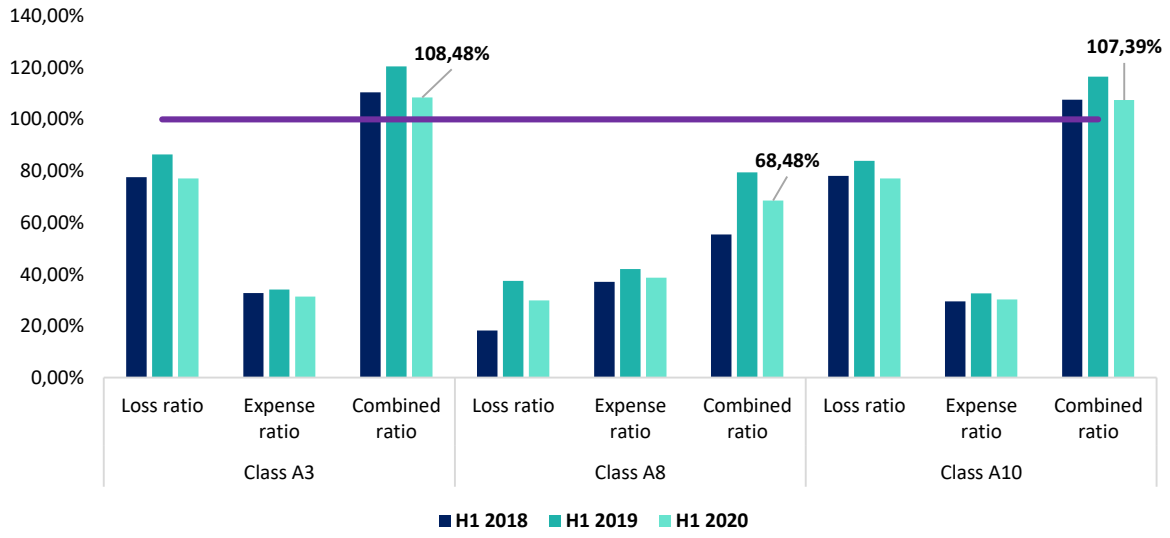
6.9. Profitability and costs

The combined ratio is an important indicator of profitability for insurance companies, from the perspective of the total costs they incur for the administration of policies (claims incurred costs and distribution and administrative expenses). A combined ratio above 1 indicates losses for insurers (cumulative costs in excess of gross premiums).

The combined ratio calculated on cumulative data for all classes of non-life insurance stood at 99.2% in the first half of 2020, decreasing compared to the same period of the previous year (109.37%).

The figure below shows the rates calculated on cumulative data for classes A3, A8 and A10, the main classes of non-life insurance which have a significant share in the total market.

Figure 99 Evolution of the loss ratio and of the combined ratio for the main classes of non-life insurance during the period 2018 – 2020



Source: FSA

In the first half of 2020, there is a decrease in the combined ratio for motor insurance (class A3 and A10) compared to the same period of the previous year. There is also a reduction in the median of the combined rate for class A3, so that 7 of the 14 companies have a combined rate below the median value (116%). 3 insurance companies reported a combined ratio less than 1 for class A3 (CASCO), the other companies recording combined ratios of over 100%.

In the first half of 2020 the combined rate for class A10 dropped compared to the same period of the previous year both cumulatively, on the total market and individually for approximately all insurance companies except two companies which had a rise in the combined ratio.

6.10. Insurance intermediaries

At the end of the first half of 2020, a number of 294 brokerage companies were registered in the records of the Financial Supervisory Authority, of which 283 were active companies.

The value of premiums intermediated by brokerage companies was Lei 3.8 billion in the first half of 2020, increasing by over 9% compared to the first half of 2019. The rise took place in the context of the appreciation of the volume of intermediated premiums for the activity of non-life insurance (+ 8.8%), as well as for the life insurance segment (+ 27.8%).

Table 32 Evolution of the intermediation degree

Period	Intermediated premiums (lei)			Intermediation level (%)		
	Total of which:	Non-life Insurance	Life insurance	Total	Non-life Insurance	Life insurance
June 30, 2016	3,015,430,624	2,937,622,339	77,808,285	**64.58%**	75.63%	9.91%
June 30, 2017	3,178,840,312	3,085,017,150	92,823,162	**63.01%**	77.66%	8.67%
June 30, 2018	3,123,895,838	3,010,400,632	113,495,206	**61.93%**	75.84%	10.56%
June 30, 2019	3,476,784,002	3,365,309,903	111,474,099	**63.92%**	78.01%	9.91%
June 30, 2020	3,802,619,958	3,660,169,460	142,450,498	**67.59%**	80.46%	13.22%

Source: FSA

The high level of intermediation on the non-life insurance market is a local feature that contrasts with the situation in most European countries, where the share of sales through insurance brokers is lower and the share of direct sales (through its own network of agents or online) is more significant.

As a result of the increase in the level of intermediation and of the gross written premiums, the revenues from the intermediation activity obtained by the insurance brokers in the first half of 2020 registered a percentage rise of 9.1% compared to the similar period of the previous year.

Table 33 Revenues from intermediation activity

30.06.2017	30.06.2018	30.06.2019	30.06.2020
470,554,012	525,487,183	612,943,868	669,011,659

Source: FSA

The share of revenues from the intermediation activity in the volume of intermediated premiums in the brokerage market was 17.59% (average commission), namely 16.65 on the non-life insurance segment and 41.85% on the life insurance segment.

6.11. The main balance sheet indicators of insurance companies

After deteriorating in 2018, the aggregate profitability of the insurance sector has recovered, resulting in an annualized return on equity of approximately 8% in the first half of 2020, a sustained upward trend. Of the top 10 companies according to the market share, only one recorded significant losses in the first half of 2020, almost all the others having increases of profitability.

Figure 100 Evolution of the aggregate financial result of all insurance companies

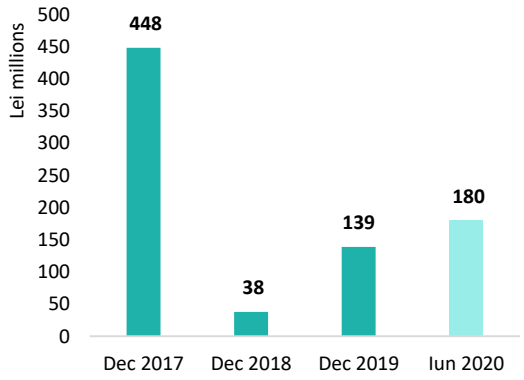
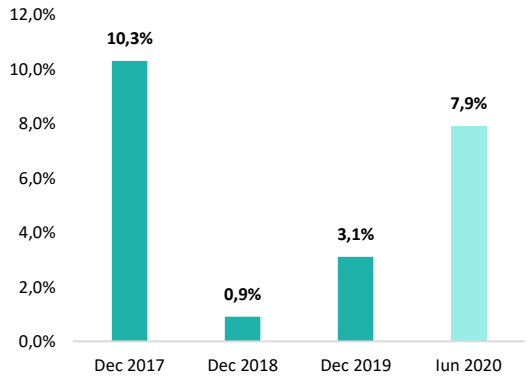
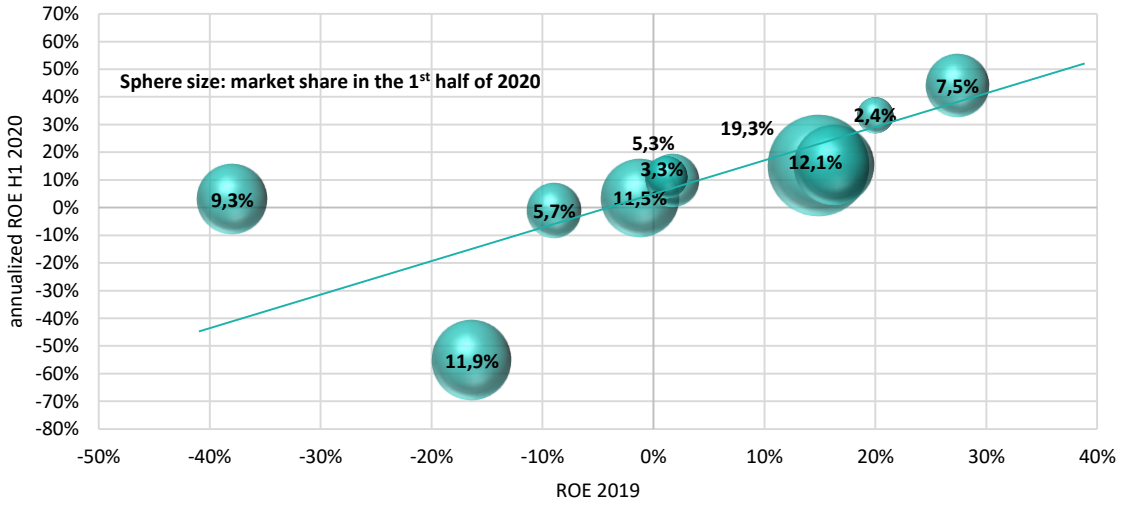


Figure 101 Evolution of aggregate annualized ROE of all insurance companies



Source: reports of insurance companies to FSA

Figure 102 Evolution of the profitability of the first 10 insurance companies during the period 2019 – 1st half of 2020 (annualized)



Source: reports of insurance companies to FSA

In dynamics, the insurance companies followed a sustained increase of assets, around 3-4% / semester, a surge that maintained during the COVID-19 crisis. Regarding the structure of liabilities,

there was a slight deterioration of own funds, along with an increase in debt and deferred income. These aggregate indicators remain at levels that do not cause systemic problems.

Figure 103 Evolution of total assets and assets growth rate for insurance companies

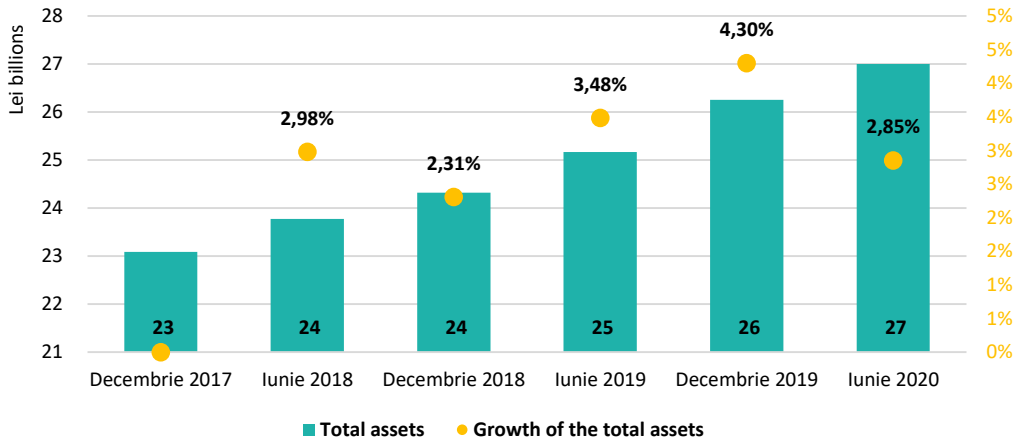
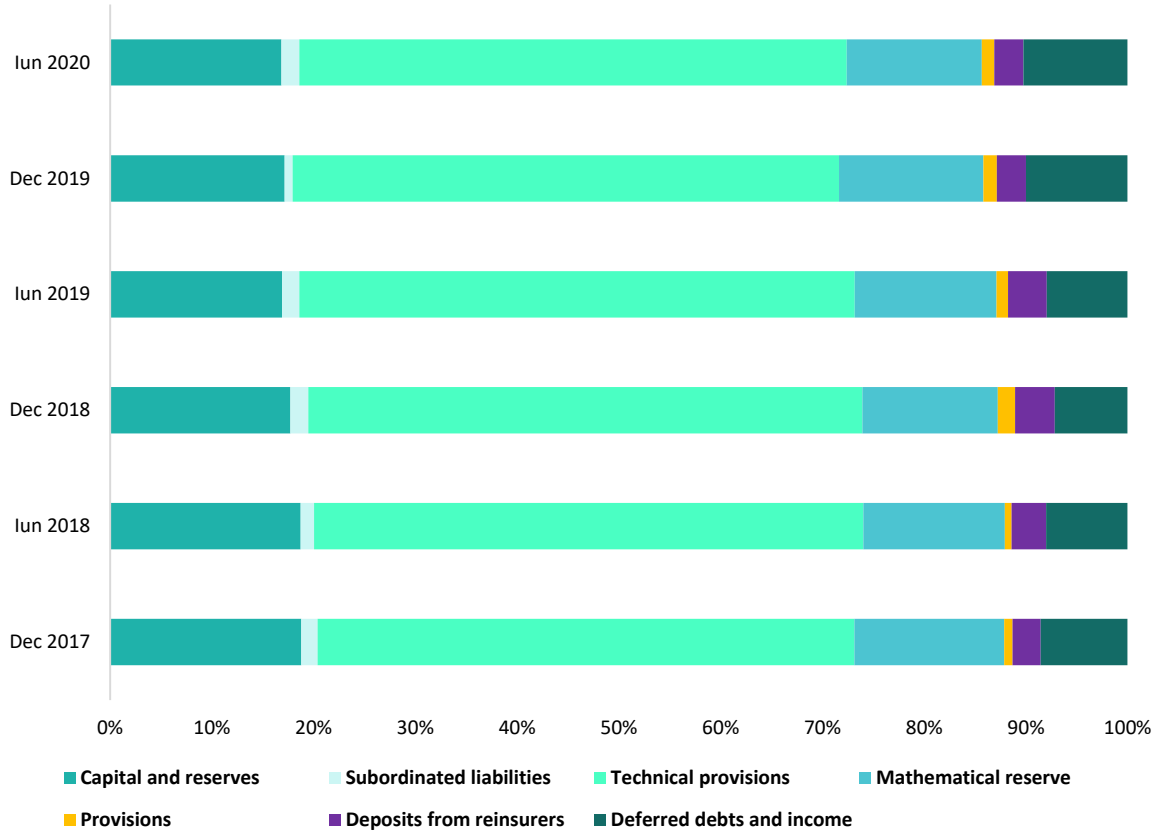


Figure 104 Aggregate evolution of insurance companies' liabilities



Source: reports of insurance companies to FSA

6.12. Potential risks and vulnerabilities in the insurance market

The high degree of concentration on the insurance market is a vulnerability both in terms of exposure by insurance classes and in terms of significant market shares held by a relatively small number of insurance companies.

From the perspective of exposure by classes, the Romanian insurance market is characterized by a high degree of concentration for the non-life insurance segment (the dominance of motor insurance in the local market is noted) as well as for the life insurance business.

The highest values of underwriting are registered by motor insurance, classes A10 (MTPL and CMR) and A3 (CASCO), which account for approximately 70% of the non-life insurance market.

Figure 105 Share of gross written premiums by insurance classes in the total gross written premiums for non-life insurance activity

Classes of insurance (non-life)	H1 2016	H1 2017	H1 2018	H1 2019	H1 2020
A10	55.5%	53.0%	48.3%	46.7%	45.4%
A3	21.4%	22.5%	24.9%	25.4%	24.4%
A8	11.9%	12.4%	13.1%	13.1%	13.3%
A15	1.6%	2.0%	2.2%	2.8%	5.1%
A2	0.9%	1.8%	2.6%	3.0%	3.6%
A13	3.0%	2.7%	3.1%	3.1%	3.2%
A9	2.1%	2.1%	2.3%	2.4%	2.5%
A18	1.0%	1.1%	1.3%	1.4%	0.7%
A1	0.8%	0.8%	0.7%	0.6%	0.5%
A16	0.3%	0.3%	0.4%	0.4%	0.3%
A7	0.4%	0.3%	0.3%	0.3%	0.3%
A5	0.2%	0.2%	0.2%	0.2%	0.2%
A6	0.4%	0.3%	0.3%	0.3%	0.2%
A11	0.3%	0.3%	0.3%	0.3%	0.1%
A4	0.0%	0.0%	0.1%	0.0%	0.1%
A12	0.1%	0.1%	0.0%	0.1%	0.0%
A17	0.0%	0.0%	0.0%	0.0%	0.0%
A14	0.1%	0.0%	0.0%	0.0%	0.0%

Source: FSA

Figure 106 Share of gross written premiums by insurance classes in the total gross written premiums for life insurance activity

Classes of insurance (life)	H1 2016	H1 2017	H1 2018	H1 2019	H1 2020
C1	68.0%	63.7%	70.3%	60.4%	63.9%
C3	27.3%	30.3%	23.5%	32.5%	26.5%
A2	4.1%	4.2%	5.9%	6.8%	9.3%
A1	0.5%	1.7%	0.3%	0.2%	0.3%
C2	0.1%	0.0%	0.0%	0.0%	0.0%

Source: FSA

The local market's dependence on motor insurance has led to losses for insurance companies over time. The combined ratios above 1 for classes A10 (MTPL and CMR) and A3 (CASCO),during the period 2018 - 2020show losses of the companies on these categories of insurance. Also, the gross claims paid for these insurance classes have a value of Lei 2.5 billion in the first half of 2020, representing 88% of the total gross claims paid for non-life insurance, respectively 75% of the total volume of gross claims paid in the entire market. Gross claims paid for motor insurance classes have

a high value also as a share in the total gross written premiums for these insurances, i.e. they cumulatively represent about 79% of the gross premiums written for the two insurance categories (classes A10 and A3).

Thus, in order to reduce the dependence of the insurance market on motor insurance, FSA has launched a series of financial education programs in order to diversify the interest of Romanian consumers for a wider variety of insurance products and services. Financial education programs aimed to increase the degree of financial inclusion, a better understanding of the insurance products existing on the market by consumers, as well as to increase consumer confidence.

In order to diversify the insurance market and to develop other insurance segments so as to reduce market dependence on motor insurance, working groups were also set up at the FSA level aiming at the development of the agricultural and health insurance markets.

A number of measures have been proposed for health insurance since 2016 (including technical clarifications on the application of tax deductibles for private health insurance policies). Thus, a more detailed analysis of the evolution of this market shows an increase in the volume of gross written premiums for health insurance from a share of 0.9% in the first half of 2016 to 3.6% in the first half of 2020 for health insurance assimilable to non-life insurance in the total gross written premiums for the entire non-life insurance market, respectively from 4.1% in the first half of 2016 to 9.3% in the first half of 2020 for those assimilated to life insurance in the total gross written premiums at life insurance market level.

From this perspective, it can be seen a tendency to diversify consumer interest in health insurance products, which implicitly leads to the development of these insurance segments. In the long run, the development of the health insurance market can improve the profitability of insurance companies by reducing dependence on insurance that brings higher losses, which ensures the financial stability of the entire insurance market in Romania.

Also, there is an increase in the concentration on the Romanian insurance market also from the perspective of the volume of gross premiums written by insurance companies. The CR3 indicator, used by the Competition Council, which represents the value of the cumulated market shares of the first 3 insurance companies from the perspective of the volume of gross written premiums, registered on June 30, 2020 a value of 53% on the non-life insurance segment, increasing compared to the level registered in the same period of the previous year (51%). Compared to the first half of 2016, when the CR3 indicator registered a value of 41%, we have noticed during the last 5 years a significant rise of the indicator, and implicitly of the concentration on the non-life insurance market.

In the analyzed period (2016-2020) a change in the ranking of the companies that subscribed the highest volume of gross written premiums can be noted. In the first half of 2016 the ranking was dominated by the companies Asirom VIG (15.5%), Allianz Ţiriac Asigurări (13.8%) and Omniasig VIG (11.7%), but in the first half of 2017 the company City Insurance doubled its market share (16.8%), and Euroins registered an increase in market share by over 50%, thus consolidating their positions on the non-life insurance market in Romania. These changes took place as a result of the bankruptcy of Carpatica, but also in the context of the modification of business strategies by some companies that diminished their volume of gross written premiums for certain classes of non-life insurance. The market share of Asirom VIG decreased from 15.5% (in the first half of 2016, when it also occupied the first position in the ranking) to 5.9% (in the first half of 2020).

Currently, the City Insurance company is the most important player in the non-life insurance market in Romania, with a market share of 23.9%, rising by almost 200% compared to the first half of 2016.

Figure 107 Ranking of the top 10 insurance companies according to the volume of gross written premiums for the non-life insurance activity

Insurance company	H1 2016	H1 2017	H1 2018	H1 2019	H1 2020
CITY INSURANCE	8.0%	16.8%	16.8%	21.6%	23.9%
EUROINS ROMANIA	10.3%	15.6%	12.1%	14.5%	14.8%
OMNIASIG VIG	11.7%	12.9%	14.1%	14.8%	14.3%
ALLIANZ - TIRIAC ASIGURARI	13.8%	14.3%	15.3%	14.2%	13.0%
GROUPAMA ASIGURARI	10.9%	11.2%	12.2%	12.2%	11.0%
ASIROM VIG	15.5%	10.2%	11.8%	4.9%	5.9%
GENERALI ROMANIA	6.1%	7.4%	6.6%	6.6%	5.2%
UNIQA ASIGURARI S.A.	5.4%	5.1%	4.1%	4.3%	4.0%
ONIX ASIGURARI S.A.	0.5%	0.5%	0.4%	0.4%	2.0%
POOL-UL DE ASIGURARE	1.8%	1.7%	1.8%	1.7%	1.7%

Source: FSA

Figure 108 Ranking of the top 10 insurance companies by volume of gross premiums written for life insurance activity

Insurance company	H1 2016	H1 2017	H1 2018	H1 2019	H1 2020
NN ASIGURARI DE VIATA	40.7%	33.5%	35.0%	35.6%	39.1%
BRD ASIGURARI DE VIATA	6.5%	6.5%	8.5%	11.3%	12.8%
BCR ASIGURARI DE VIATA VIG	11.4%	18.2%	16.0%	18.3%	12.6%
ALLIANZ - TIRIAC ASIGURARI	7.5%	6.9%	7.2%	7.3%	8.7%
SIGNAL IDUNA	2.7%	2.9%	4.7%	5.3%	7.2%
GENERALI ROMANIA	4.8%	3.2%	3.2%	6.2%	5.5%
ASIROM VIG	7.3%	6.1%	6.9%	5.9%	4.8%
UNIQA ASIGURARI DE VIATA	3.4%	2.6%	4.1%	3.7%	3.4%
GRAWE ROMANIA	2.8%	2.1%	2.1%	2.0%	2.1%
GROUPAMA ASIGURARI	2.3%	1.6%	2.0%	1.5%	2.1%

Source: FSA

Conduct risk

In order to ensure a fair treatment and to protect the rights of insurance policyholders, FSA carries out **supervision and inspection activities for the compliance with the rules of conduct.**

Conduct risks:

- Customers may incur losses in case of early termination or of requesting payments in disadvantageous market conditions;

- Although the customer relations activity is carried out online, certain departments are not connected to the customer relations unit, making communication difficult, and thus the requested information is transmitted late;

- The possibility of suspending MTPL insurance contracts will increase the operational risk for companies;

- Interruption of payments to the insured as a result of the decrease of their incomes will lead to the

impossibility of continuing the contractual relations and the termination of the insurance contracts;

- The slowing down of the functional activities for solving the claim files for which the physical contact is necessary: medical examinations, expert reports, findings / refindings, etc .;

- Changing the conditions for supervision and inspections, both internal and external, can impact market stability if they arenot performed responsibly and in good faith.

The main issues identified for the MTPL policy, the insurance product with the most of the notifications and complaints registered by insurers, but also by market supervisors, are:

• Delayed payment of compensations related to MTPL claim files;
• Exceeding the legal deadline for the communication of the maximum compensation amount;
• Exceeding the legal deadline for submitting the compensation offer;
• Exceeding the legal deadline for sending the rejection notification for the payment of the claim file;
• Exceeding the legal deadline for carrying out the finding / refinding.

In the first half of 2020, there was a significant increase in the total number of complaints submitted to the Financial Supervisory Authority compared to the similar period of the previous year, mainly a boost in the number of complaints registered for the insurance-reinsurance sector. During the analyzed period, 21,861 complaints and non-compliance notifications were recorded, rising by approximately 115%, most of them (approximately 97%) targeting the insurance market.

Of the **21,244 complaints and non-compliance notifications** from the first semester of 2020 for the **insurance-reinsurance market, 18,111 complaints and non-compliance notifications** were **uniquely registered**. The main subject of the complaints for the insurance-reinsurance sector consisted in the failure to comply with the provisions of the legislation in the field and with the rules of the Financial Supervisory Authority / contractual conditions.

An analysis of the structure of the complaints according to the insurance classes shows that about 96% of them are **related to class A10**, compulsory motor third party liability insurance (MTPL and CMR).

*The insurance companies for which the highest number of complaints and non-compliance notifications was uniquely analyzed in the first half of 2020 were **Euroins** (11,225) and **City Insurance** (5,129),* the insurers with the highest market shares in the non-life insurance segment in Romania.

In the case of both insurance companies there is a significant increase in the number of complaints and non-compliance notifications compared to the first half of 2019. The cumulative number of complaints for the two companies represents approximately 90% of the total number of complaints submitted to FSA for the insurance sector.

FSA ensures the monitoring of the insurance market to identify innovative technological solutions, implemented by insurance companies, especially under the current COVID-19 situation, and which respect the rights of insurance products' consumers. The website of the InsurTech HUB group has been constantly updated and a close link has been maintained between the members of InsurTech HUB and FSA.

Given the protection and management measures for the crisis generated by COVID-19, which encouraged companies to operate remotely, the risks in the cyber sector increased, in particular those related to the loss or unauthorized use of data.

Following the analysis carried out by the FSA, a notification regarding cyber risk warning was transmitted to all insurance companies, notification that included a series of recommendations to mitigate this risk, including the review / identification with the external IT auditor / IT service provider outsourcing vulnerabilities and the identification of the ways to address the operational risks in compliance with the requirements of *Rule no. 4/2018*, as well as the ASF notification regarding any cyber incident that occurred in the current activity of the insurance company.

FSA analyzes the insurance products of companies and intermediaries and has identified several aspects likely to harm consumers, such as: incomplete information, vague identification of the target market, ambiguous definitions of terms, likely to mislead consumers, non-coverage of risks during the grace period, disagreement with the legislation of non-bank financial institutions, etc. These aspects are subject to continuous supervision and controls carried out by teams of specialists, but also to discussions with company representatives in order to remedy the identified deficiencies.

Given the importance of protecting insurance products' consumers and ensuring the stability of the insurance market, FSA carries out the project "*Enhancing the supervision function of the Romanian insurance market in respect of market conduct*", funded by the European Commission, which involves technical assistance provided by EIOPA in the field of supervising the conduct of insurance distributors. The project aims to **develop supervision tools based on risk assessment on the conduct of distributors in the relationship with the customers**, by implementing:

- the conceptual framework for identifying and monitoring conduct risks through the life cycle of insurance products;
- the reporting system transmitted regularly by the entities supervised by FSA;
- risk assessment tools to monitor the conduct risks of insurance products at market level, including the implementation of a system of market conduct indicators;
- risk assessment tools to monitor conduct risks at the level of each insurance company, including the implementation of a system of conduct indicators at company level;
- the process for approving the priorities for conduct and action plan supervision;
- the process for approving the conduct supervision measures to be taken as a result of the supervision activities / actions.

6.13. The impact of the COVID-19 pandemic on the insurance market

The year 2020 began with the emergence of a new risk to financial markets related to the rapid spread of COVID-19, with significant effects on the entire economic activity.

The long-term impact of COVID-19 on the insurance sector is uncertain, but we can expect a number of disruptions at European level, with potential consequences including on the domestic market.

The main risk areas identified were:

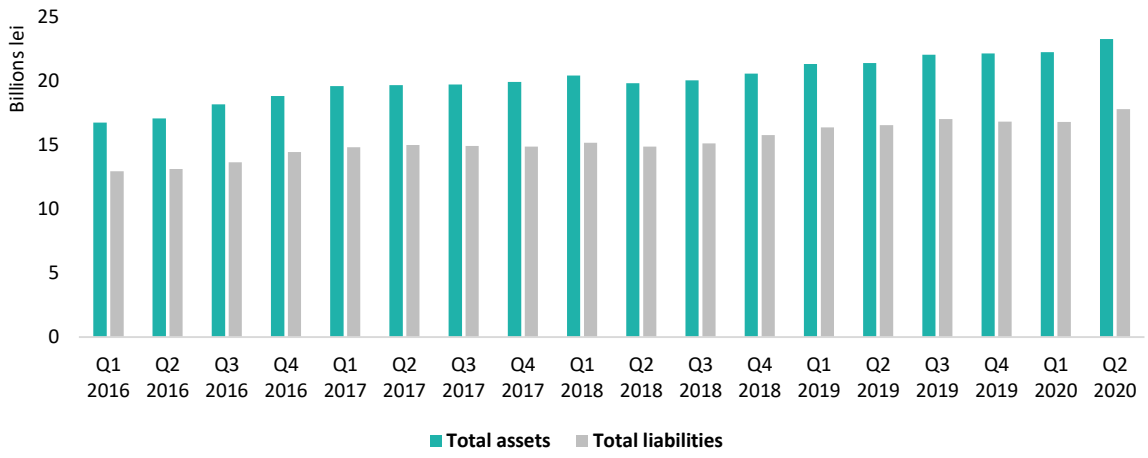
- the decrease of the insurance companies' assets value as a result of the massive drops of prices on the stock exchanges;

- the increase in the value of insurers' liabilities, arising from the materialization of risks due to the spread of COVID-19, especially in the case of health insurance products, death, temporary incapacity for work, risk of non-payment of insured's debts, insurance attached to banking products, travel insurance abroad.

In the mid to long term, the current economic environment with ultra-low interest rates can have a negative impact on the solvency and profitability of insurance companies (especially in the life insurance segment), due to the risk of reinvestment in bonds with lower yields as bonds currently in insurers' portfolios mature.

All these cumulative adverse developments indicate a double impact for insurers: both on assets and on liabilities, with potential negative consequences on companies' solvency and financial position.

Figure 109 Quarterly evolution of total assets and liabilities of insurance companies



Source: FSA

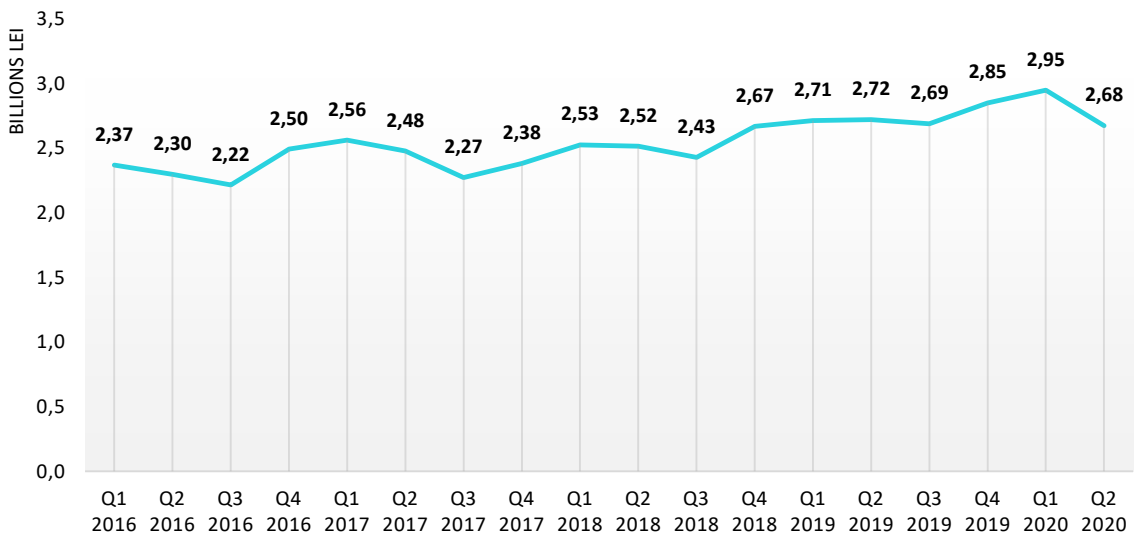
At the end of the second quarter of 2020, the value of assets as well as the value of liabilities of the insurance companies (measured according to the principles of the Solvency II regime) rose compared to the end of the last quarter of 2019, before the risk of COVID-19 pandemic. Total assets increased by about 5%, and total liabilities of insurance companies raised by 6% during the analyzed period. As a result of the positive dynamics of total assets, the value of the excess of assets over liabilities, which is the main component of Tier 1 items related to own funds eligible to cover capital requirements, also increased during this period. The significant share of Tier 1 items in the total eligible own funds indicates that, at market level, the capital held by insurance companies in Romania is of very good quality (mainly own funds).

In the context of the spread of COVID-19 and of the strict containment measures imposed by states impacting the economic activity, these risks may be joined by the business risk generated by a potential fall in the volume of gross written premiums and an increase in redemptions of the policies in force.

The increase in the volume of gross written premiums in the first 6 months of 2020 compared to the same period of the previous year is due exclusively to the positive dynamics recorded in the first quarter of 2020, when the volume of gross written premiums reached the highest quarterly value in recent years (Lei 2, 95 billion). However, from the underwriting perspective, in the second quarter of 2020 the Romanian insurance market was impacted by the effects of the COVID-19 pandemic and of

the containment measures, the value of gross written premiums standing at Lei 2.68 billion, dropping by 1.8% compared to the second quarter of 2019, respectively by 9.3% compared to the previous quarter.

Figure 110 Quarterly evolution of the total volume of gross premiums underwritten by the insurance



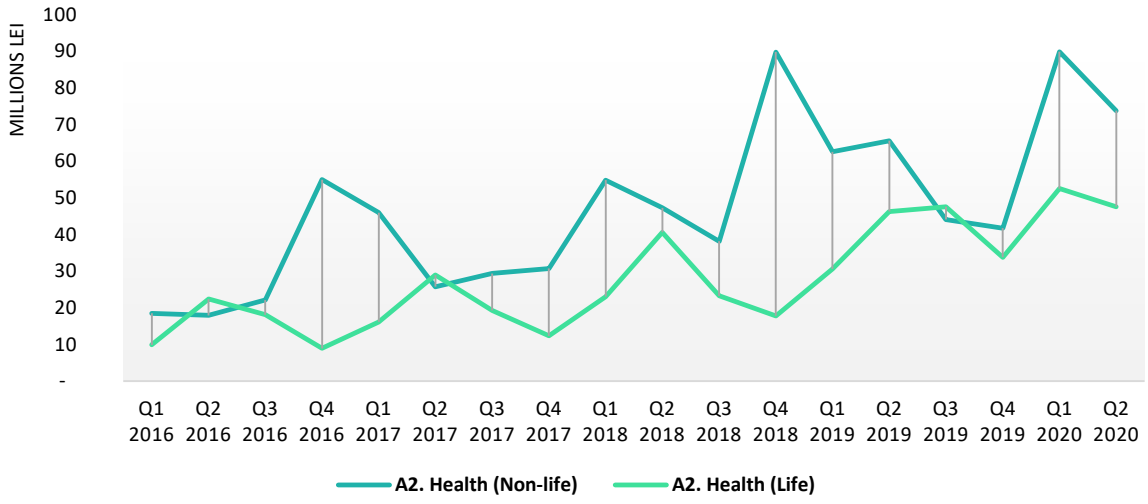
Source: FSA

Compared to the first quarter of 2020, the Romanian non-life insurance market dropped by 5% in the second quarter of 2020, but the value of underwriting remained at a higher level than that recorded during the same period the previous year, despite the containment measures. The decrease of the gross written premiums between April - June 2020 compared to January - March took place in the context of the decrease of the GWP value for the main insurance classes: class A10 (-6.8%), class A3 (-4.0%) and class A8 (-14.8%).

The life insurance market dropped by 25% in the second quarter of 2020 compared to the previous quarter, due to the decrease in the value of gross written premiums for all insurance classes.

In the first quarter of 2020, the health insurances registered the highest volume of gross written premiums for both insurance segments: approximately Lei 90 million for non-life insurance, respectively Lei 52.5 million for life insurance, cumulating in total over Lei 142 million, rising by 88% compared to the fourth quarter of 2019, respectively by 53% compared to the first quarter of 2019. In the second quarter of 2020, the value of gross written premiums for health insurance exceeded Lei 121 million, dropping by 14.7% compared to the previous quarter, but the value of underwritings for both categories of health insurance (life and non-life) was above the level recorded in the second quarter of 2019.

Figure 111 Quarterly evolution of the volume of gross premiums subscribed by insurance companies for class A2 (health insurance)



Source: FSA

In addition to the measures taken in March 2020 in the context of the COVID-19 pandemic outbreak, FSA issued *Instruction no. 3/2020 on sending reports and other documents in electronic format to the Financial Supervisory Authority*, subsequently the application deadline being extended until December 31, 2021.

Also, FSA amended and supplemented *Rule no. 20/2017* on motor insurance in Romania regarding the article that regulates the proof of concluding the MTPL insurance in case of controls performed by the competent authorities. Thus, the MTPL insurance policy and the MTPL contract issued by the MTPL insurer, for the registered validity period, can also be presented in electronic format.

7. Stability of guarantee mechanisms

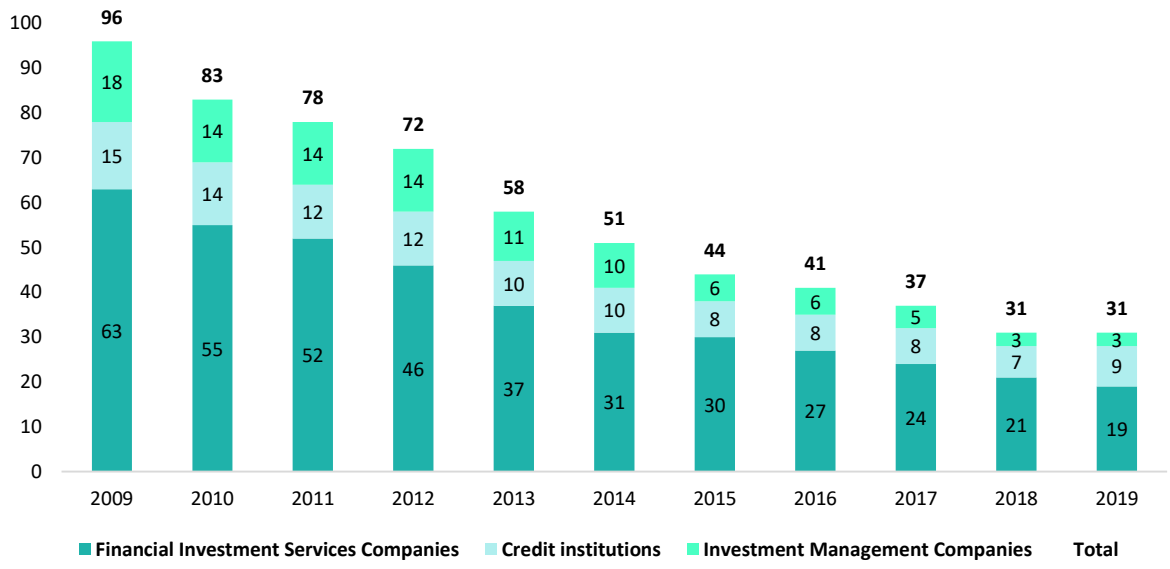
7.1. Investor Compensation Fund

The Investors Compensation Fund (ICF) was established in June 2005 and aims to compensate investors in the event of members' inability to return funds and/or financial instruments due or belonging to investors, which were held on their behalf during the provision of financial investment services or the management of individual investment portfolios.

Starting with January 1, 2012, ICF has the obligation to compensate investors equally and non-discriminatorily within a maximum threshold representing the Lei equivalent of EUR 20,000 / individual investor.

The members of the Fund are all the intermediaries authorized to provide financial investment services and the investment management companies that manage individual investment portfolios[30]. The number of members of the Fund remained in 2019 at 31. Of them, 19 are investment firms, 9 are credit institutions and 3 are investment management companies.

Figure 112 Evolution of the number of ICF members by categories

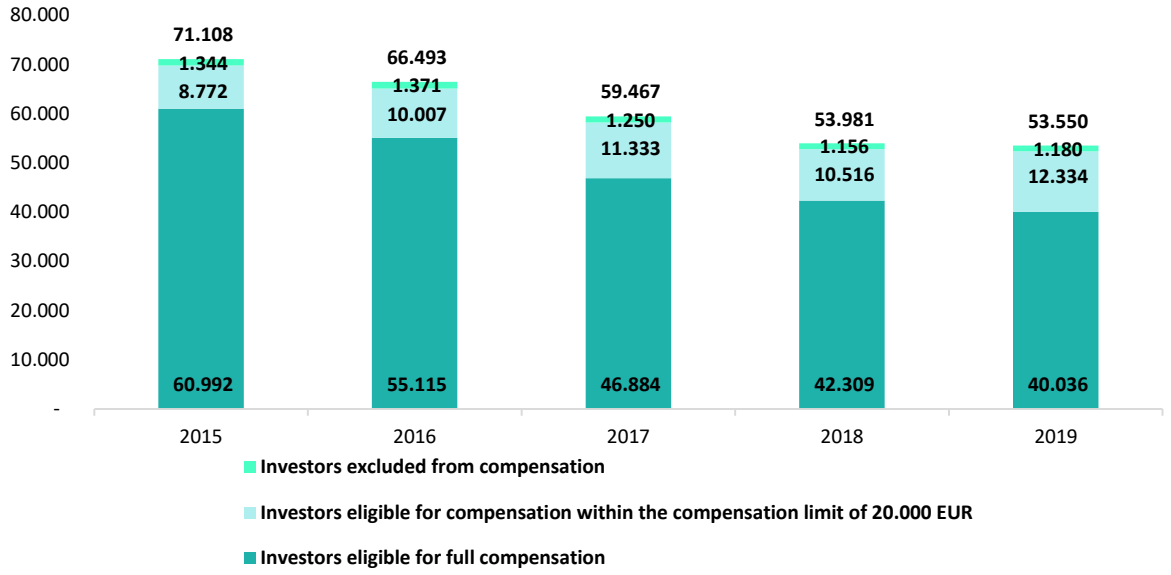


Source: Investors Compensation Fund, 2019 Annual Report

The number of investors at the end of 2019, according to data published by the ICF, was 53,550, regardless of whether an investor uses one or several intermediaries or investment management companies. They represent all investors who own holdings representing funds and / or financial instruments in with the Fund members.

[30] Intermediaries and investment management companies from other Member States of the European Union, as well as their branches that provide, as appropriate, financial investment services or services for the management of individual investment portfolios in Romania, based on the free movement of services may become members of the Fund, if the level of the threshold and the extent offered by the Fund exceeds the level and coverage offered by the investor compensation scheme of the home Member State, in order to supplement the coverage already enjoyed by its investors by virtue of the investor compensation scheme of the home Member State, according to *Law no. 297/2004 on the capital market*.

Figure 113 Evolution of the number of investors



Source: Investors Compensation Fund, 2019 Annual Report

About 78% of the number of investors came from the category of investment firms.

Table 34 Classification of investors by categories of members at the end of 2019

Categories of members	Investors eligible for full compensation	Investors eligible for compensation within the compensation limit	Investors excluded from compensation	Total
Investment firms	33,698	7,397	559	41,654
Credit institutions	6,322	4,733	618	11,673
Investment Management Companies	16	204	3	223
Total	40,036	12,334	1,180	53,550

Source: Investors Compensation Fund, 2019 Annual Report

In 2019, the investment eligible to compensation rose by about 17% while the Fund`s resources fell by about 6.2%.

Table 35 Evolution of the indicators for measuring the compensation capacity during the period 2017 – 2019

Indicator	Dec-17	Dec-18	Dec-19
Fund`s resources (thousand lei)	16,817	18,256	17,130
Investment eligible to compensation (thousand lei)	1,795,163	1,663,212	1,949,345
Number of members	37	31	31
Coverage index of the Fund`s exposure	0.94%	1.10%	0.88%
Coverage level of investment eligible to compensation	52.94%	57.14%	53.33%
Coverage level of cash funds	85.29%	78.57%	70.00%

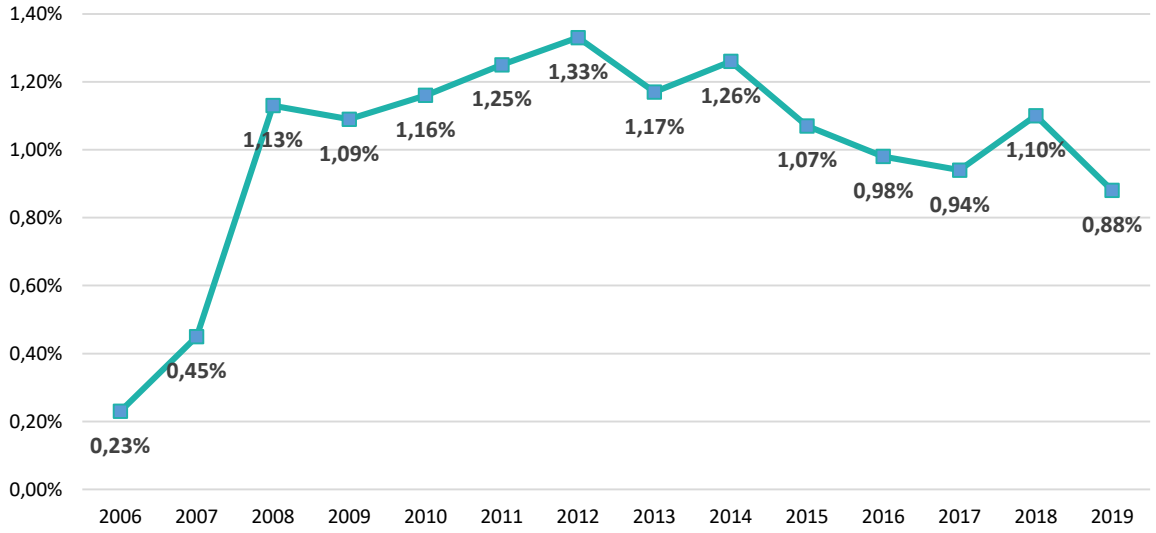
Source: Investors Compensation Fund, 2019 Annual Report

For the permanent monitoring of the compensation capacity, ICF follows the evolution of the following indicators:

- *Coverage index of the Fund`s exposure*: represents the ratio between the Fund`s resources (intended for compensation) and the total amount of investments eligible for compensation.

The Fund's compensation capacity registered a slight decrease to the level of 0.88% at the end of 2019 determined by the reduction of resources after the compensations payment of the amount of Lei 2,605,187 to the client investors of Mobinvest SA.

Figure 114 Evolution of the Coverage Index of the Fund's Exposure



Source: Fondul de Compensare a Investitorilor, Raport anual 2019

- *Covered level of the investment eligible for compensation*: determines the number of members that the Fund can compensate individually and is calculated as the ratio between the number of ICF members for which the investment eligible for compensation is less than or equal to the available resources and the total number of members.

The fund has the capacity to compensate 16 members with investments eligible for compensation lower than the Fund`s resources, resulting in coverage ratio of investments eligible for compensation of 53.33%, dropping compared to the end of 2018 when this ratio was 57.14%.

- *Coverage level of the cash funds*: highlights the cash funds ability to compensate and is calculated as a ratio between the number of members for which the cash funds are less than or equal to the Fund`s resources and the total number of members.

Taking into account only the cash funds of investors, the Fund can individually compensate individually a number 21 members, the individual value of the funds reported by them being below the level of ICF resources. The coverage level of the cash funds was 70.00% at the end of 2019, dropping compared to the previous year 2018, when this indicator was 78.57%.

The average portfolio of a fully compensable investor rose in 2019, reaching for the first time the value of EUR 4,026. Among investors in this category, the largest average portfolio is held by clients of investment management companies, with an average value of EUR 15,042.

Table 36 Evolution of an investor's average portfolio (EUR)

Indicator	2015	2016	2017	2018	2019
Investors eligible to full compensation	2,389	2,679	3,383	3,458	4,026
Investors eligible to compensation within the compensation limit	188,653	178,883	177,642	208,121	211,030
Investors excluded from compensation	6,323,630	6,086,753	7,709,144	8,547,907	10,750,749

Source: Investors Compensation Fund, 2019 Annual Report

Table 37 Evolution of the average portfolio of a fully compensable investor (EUR)

Indicator	2015	2016	2017	2018	2019
Investment firms	1,920	2,224	2,989	3,068	3,496
Credit institutions	5,465	5,624	5,509	5,825	6,838
Investment Management Companies	14,759	15,164	14,972	14,046	15,042
Medium portfolio /fully compensable investor	2,389	2,679	3,383	3,458	4,026

Source: Investors Compensation Fund, 2019 Annual Report

In 2019, the Fund collected annual contributions amounting to Lei 1,374,913, representing approximately 5.87% of the total annual contributions collected during the period 2005-2019. After three years (2016-2018) when no new member joined the Fund, in 2019 three new companies became members of the Fund. Thus, initial contributions in the amount of Lei 104,500 were collected. The contributions for administration and operation expenses in the amount of Lei 201,118 are also added. In 2019, the Fund paid compensations amounting to Lei 2,605,187 to the client investors of Mobinvest SA.

Table 38 Evolution of the Fund members' initial contributions during the period 2005 - 2019 (lei)

Member category	Initial contributions 2005 - 2015	Initial contributions 2016	Initial contributions 2017	Initial contributions 2018	Initial contributions 2019	Total
FISCs contributions	351,636	-	-	-	-	351,636
Contributions from credit institutions	183,269	-	-	-	104,500	287,769
IMCs contributions	114,934	-	-	-	-	114,934
Total initial contributions	649,839	-	-	-	104,500	754,339

Source: Investors Compensation Fund. 2019 annual report

Table 39 Evolution of the annual contributions of the members of the Fund during the period 2005 - 2019 (lei)

Member category	Annual contributions 2005 - 2015	Annual contributions 2016	Annual contributions 2017	Annual contributions 2018	Annual contributions 2019	Total
FISCs contributions	14,529,213	726,089	751,007	836,669	900,381	17,743,359
Contributions from credit institutions	2,832,855	390,892	482,278	536,997	412,280	4,655,302
IMCs contributions	750,867	73,034	69,132	65,147	62,252	1,020,432
Total initial contributions	18,112,935	1,190,015	1,302,417	1,438,813	1,374,913	23,419,093

Source: Investors Compensation Fund. 2019 annual report

According to the applicable legal framework, the financial resources of the Investor Compensation Fund can be invested in:

- bonds of the central and local public administration;
- government securities and other low-risk assets issued by Member States, securities issued by their central banks and securities issued by the United States Treasury;
- term deposits with credit institutions, Romanian legal entities or branches of foreign credit institutions authorized to operate on the Romanian territory, which are not in the procedure of special supervision or special administration;
- other low risk financial instruments, with the approval of the FSA Council.

In 2019, over 93% of ICF resources were invested in government securities.

Table 40 ICF's investment portfolio in 2019

Types of investments	Average resources invested (lei)	Share in the portfolio (%)	Average yield (%)
Discounted treasury bonds	375,343	2.13%	2.88%
Benchmark government bonds	16,434,731	93.07%	3.17%
Negotiated term deposits	829,601	4.70%	1.98%
Overnight deposits	18,376	0.10%	0.60%
Total	17,658,051	100.00%	3.10%

Source: Investors Compensation Fund. 2019 annual report

According to the 2019 Annual Report of ICF, following the compensation cases from 2015-2018, its resources fell substantially in the context in which during March 2019 the Fund ended the payment period of the compensations due to the client investors of Mobinvest SA amounting to Lei 2,605,187. Furthermore, the main risk identified by the ICF is that it does not have sufficient financial resources to compensate investors in the event of a new case of compensation. At the same time, the Fund must ensure a balance between its payment obligations (compensation capacity and current obligations resulting from the operation of the Fund) and members' ability to contribute to the Fund's resources. Therefore, ICF estimated that the year 2020 will be extremely difficult from a financial point of view caused mainly by the effects of the COVID-19 pandemic for all participants on the Romanian capital market, and a new hypothetical compensation situation increases the stability risk for the Investors Compensation Fund.

7.2. Policyholders Guarantee Fund

The Policyholders Guarantee Fund (PGF) is established based on Law no. 213/2015[31] and aims to protect insurance creditors in the event that an insurer enters bankruptcy proceedings, within the limit of a guarantee threshold of Lei 450,000 per insurance creditor.

In 2019, the Fund managed payment compensations towards the insurance creditors of the following insurance companies:

- Astra SA;

[31] on the Insured Guarantee Fund

- Carpatica Asig SA;
- Forte Asigurări Reasigurări SA;
- LIG Insurance SA;
- Grup As SA;
- Metropol CIAR SA.

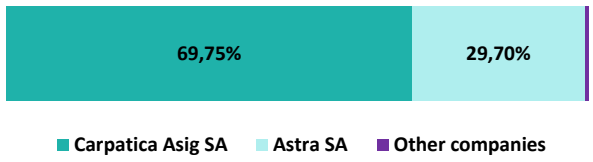
Based on the payment requests, 2,841 files that did not require a finding were opened (administrative regressions, bodily injuries, BAAR files, medical insurance, sentences, etc.). At the same time, a number of 2604 payment requests were registered with the PGF in 2019.

Table 41 Status of claims and payment claims submitted in 2019 to the PGF

Company	Claim files opened in 2019 without findings	Payment requests submitted by creditors in 2019
Astra SA	418	1,121
Carpatica Asig SA	2,380	1,418
LIG SA	39	55
Forte SA	1	2
Ggrup As SA	2	7
Metropol CIAR S	1	1
Total	2,841	2,604

Source: Policyholders Guarantee Fund, Annual Report 2019

Figure 115 Structure of claim payments made by the PGF in 2019



Source: Policyholders Guarantee Fund, Annual Report 2019

During 2019, the Policyholders Guarantee Fund made claim payments from its cash in a total amount of Lei 169,897,736, of which 99.46% were related to the bankruptcies of Astra SA and Carpatica Asig SA.

The financial resources of the Policyholders Guarantee are managed separately in accounting and may come from the following sources:

- contributions from insurers calculated separately on the two categories of insurance, respectively non-life insurance and life insurance:

  - 1% of gross premiums received for non-life insurance;
  - 0.4% of gross premiums received for life insurance.

- interest and penalties for late payment of contributions by insurers;

- amounts from the use of cash;

- amounts from the recovery of the Fund's receivables;

- amounts from other sources, established according to law;

- loans from credit institutions or bond loans.

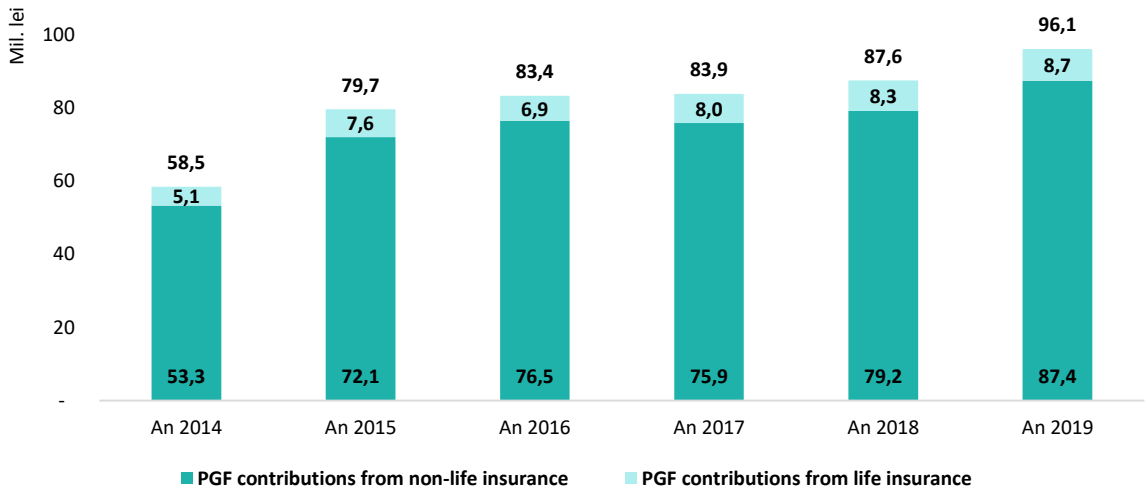
The specific and financial revenues of the PGF in 2019, amounting to Lei 348,653,009 were obtained from several sources provided by the applicable legislation.

Table 42 Structure of PGF revenues in 2019

Income category	Value	Total share
Fund-specific income, of which:	**330,541,596**	**94.81%**
Contributions due by insurers	96,096,786	27.56%
Income from receivables related to bankruptcy proceedings	234,063,496	67.13%
Income from renting a real estate	168,206	0.05%
Other incomes	213,108	0.06%
Interest related to the use of financial resources	**18,111,413**	**5.19%**
Total	**348,653,009**	**100.00%**

Source: Policyholders Guarantee Fund, Annual Report 2019

Figure 116 Evolution of PGF contributions during 2014 – 2019



Source: Policyholders Guarantee Fund, Annual Report 2019

PGF can also carry out the activity of special administrator, in the procedure of insurers' financial recovery, or of liquidator, in the procedure of insurers' voluntary liquidation, under the conditions provided by *Law 503/2004 on the financial recovery and bankruptcy of insurance undertakings , republished, with subsequent amendments.*

The Policyholders Guarantee Fund also manages a distinct, specialized structure, namely Insurers' Resolution Fund. Its funds are made up of the contributions due by insurers starting with February 2016 and collected by PGF and have reached the threshold established by art. 1 par. (2) of the FSA Rule no. 3/2016[32]. Therefore, starting with July 2017, the calculation and payment of the contribution to the Resolution Fund by the insurance companies was interrupted, the last reporting month being June 2017[33].

[32] on the contribution rates due by insurers to the Insurers' Resolution Fund administered by the Fund for the Protection of the Insured

[33] Source: Fund for the Protection of the Insured, Annual Report 2019

The financial resources of the Policyholders Guarantee Fund and of the Insurers' Resolution Fund at the end of 2019 were invested in bank deposits and government securities.

Table 43 Structure of investments from the financial resources belonging to the Policyholders Guarantee Fund at the end of 2019

Financial resources investments	Value	Share
Government securities	531,366,373	92.13%
Bank deposits	45,400,000	7.87%
Total	576,766,373	100.00%

Source: Policyholders Guarantee Fund, Annual Report 2019

Table 44 Structure of investments from the financial resources belonging to the Insurers' Resolution Fund at the end of 2019

Financial resources investments	Value	Share
Government securities	47,240,138	90.64%
Bank deposits	4,876,647	9.36%
Total	52,116,785	100.00%

Source: Policyholders Guarantee Fund, Annual Report 2019

The Policyholders Guarantee Fund has demonstrated a prudent approach in managing the resources collected according to the applicable legal provisions, as well as in developing an adequate operational capacity to manage payment claims following past bankruptcies that occurred on the insurance market. However, the high concentration present in both the non-life and life insurance segment, as well as the large number of people included in compulsory and voluntary insurance increase the risk on the stability of the PGF in the hypothetical situation of bankruptcy of a high market share company.

7.3. Private Pension System Rights Guarantee Fund

The Private Pension System Rights Guarantee Fund (PPSRGF) was established by *Law no. 187/2011*[34] in order to compensate the eventual losses of the participants and / or beneficiaries to the private pension funds, both during the contributions accumulation period and during entitlement after the opening, resulting from the administrators' or pension providers' inability to honor the obligations undertaken and to ensure the payment of participants' or beneficiaries' rights to the private pension funds, in case of the administrators' or private pension providers' impossibility to ensure such payments.

The fund is mainly intended to cover unpredictable risks, which are not covered by the technical provision constituted by the administrators according to the financial commitments undertaken and which cover biometric risks: death, disability, longevity, etc.

The guarantee scheme established by PPSRGF includes:

[34] With regard to the Private Pension System Rights Guarantee Fund

- all the pension funds from Pillar II authorized by FSA that provide the guarantee imposed by *Law no. 411/2004*[35], respectively the value of the contributions paid less any possible transfer penalties and legal commissions.
- the voluntary pension funds from Pillar III which provide a guarantee undertaken through the prospectus of the voluntary pension scheme based on Law no. 204/2006[36].

The sum of the technical provisions related to each privately managed pension fund, respectively to each voluntary pension fund represents the Guarantee Fund requirement and their records are kept separately for each private pension fund. The technical provisions are the reserves additional to the technical provisions related to each private pension fund and are constituted at PPSRGF from administrators' annual contributions.

The first actuarial calculation was performed in 2013, and until 2017 there were derogations from its performance. Starting with 2018, the actuarial calculation of the guarantee fund requirement is performed by a specialized company, so that on December 31, 2019, the guarantee fund, cumulated with the valorization obtained from the investment, amounted to Lei 29,697,126.

During 2019, the financial resources of the guarantee fund consisted of:

- amounts paid as annual contributions to the Guarantee Fund, distinct for voluntary pension funds, respectively privately managed pension funds, calculated by actuarial methods;
- amounts paid to the Guarantee Fund to cover expenses related to administration and operation;
- amounts resulting from the use of invested funds.

Table 45 Evolution of funds receipts intended for guarantee

Indicators	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19
Annual contributions, of which:	761,933	1,219,093	1,676,254	2,133,018	2,911,722	24,028,020	28,326,926
Pillar II	745,208	1,192,332	1,639,457	2,086,582	2,847,181	23,160,755	27,297,915
Pillar III	16,726	26,761	36,797	46,437	64,541	867,265	1,029,011
Income from the use of investments, of which:	12,873	21,945	66,537	152,308	226,039	473,706	1,370,200
Pillar II	12,632	21,276	65,592	151,135	223,695	470,110	1,312,614
Pillar III	241	669	945	1,173	2,344	3,596	57,586
Total	774,806	1,241,038	1,745,791	2,285,326	3,137,760	24,501,726	29,697,126

Source: Private Pension System Rights Guarantee Fund, Activity Report 2019

Since its launch and until now, the Guarantee Fund has received under its administration, in order to protect the rights of participants in the private pension system, total contributions amounting to Lei 28,326,926 and has obtained through the investment activity net gains amounting to Lei 1,370,200, generating a total yield at the end of 2019 of 4.84%.

[35] Regarding privately managed pension funds

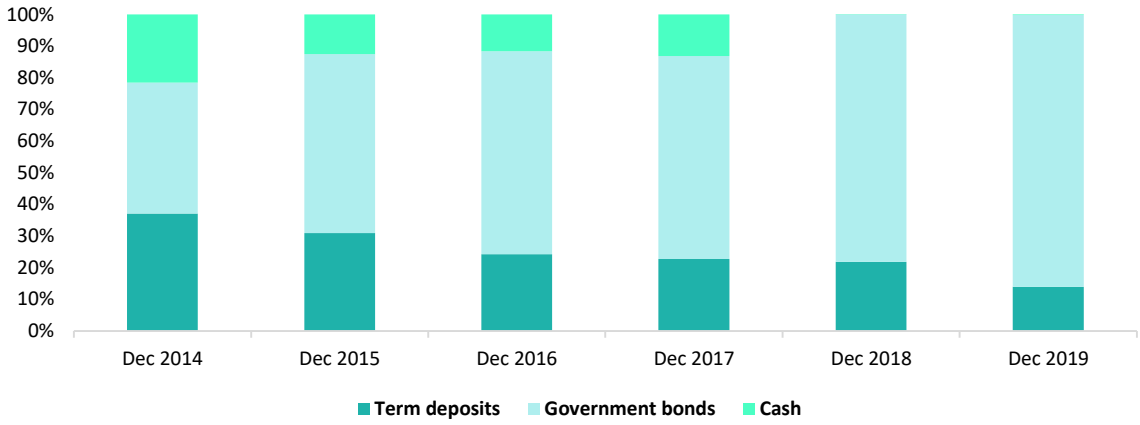
[36] Regarding voluntary pension funds

The guarantee fund invests only on the Romanian market and is in the category of small, low-risk institutional investors. The financial resources intended to guarantee the rights from the private pension system (annual contributions) were placed during 2019 in the financial instruments allowed by law: government securities issued in lei and bank deposits set up with credit institutions authorized to operate in Romania, which are not under special supervision or special administration procedure, in optimal conditions for diversification, so as to avoid excessive dependence on a particular financial instrument or issuer that has not exceeded 45% of the assets intended to guarantee rights in the private pension system, except securities issued by the Romanian state.

Figure 117 PPSRGF portfolio structure at the end of 2019[37]

Source: Private Pension System Rights Guarantee Fund, Activity Report 2019

Figure 118 Evolution of the allocation of the guarantee fund resources during the period 2014 – 2019



Source: Private Pension System Rights Guarantee Fund, Activity Report 2019

The structure of the private pension system in Romania provides several mechanisms to protect the rights of participants, including: segregation of assets between administrators and funds, additional checks and validations by depositaries, technical provisions established by administrators, reporting requirements and increased transparency, to which the Private Pension System Rights Guarantee Fund is added. This construction of the market together with the stage of its evolution which is still in a period of accumulation determines the maintenance of a low risk on the PPSRGF stability.

[37] The amounts being settled are represented by the acquisition costs of the securities to be amortized and they represent 0.04%.

8. Financial stability and macroprudential policies

8.1. Macroprudential tools implemented by FSA

FSA carries out periodic analyses on the risks and vulnerabilities identified in the three supervised non-bank financial markets, as well as the opportunity to implement the existing macroprudential instruments. To date, the following macroprudential measures have been implemented:

- At the level of investment firms (IF): the capital conservation buffer (implemented in 4 equal annual installments of 0.625% of the total value of risk-weighted exposures, between January 1, 2016 - January 1, 2019):
    - o From January 1, 2016 - 0.625%;
    - o From January 1, 2017 -1.25%;
    - o From January 1, 2018 -1.875%;
    - o From January 1, 2019 - 2.5%.
- Regarding the countercyclical capital buffer and the systemic risk buffer, so far there are no conditions that require the establishment of a level higher than 0% for this buffer in the case of investment firms (IF).
- In the case of insurance companies, FSA maintained the previously implemented macroprudential elements:
    - o the liquidity index of the insurance companies: monitoring and analysis of the liquidity ratio corresponding to the insurance companies at least quarterly;
    - o recovery plan;
    - o Policyholders Guarantee Fund.
- For the private pensions market, FSA maintained in 2019 the macroprudential instrument regarding the restrictions on significant exposures regulated by Law no. 411/2004 regarding the privately managed pension funds, Law no. 204/2006 regarding the voluntary pensions, Rule no. 11/2011 on investing and valuing the assets of private pension funds;
- In the case of private pension fund managers, in order to avoid concentrating on a small number of issuers, the limitation of exposure to an issuer has been maintained to 5% of the net assets, and the exposure to a group of issuers and their affiliates cannot exceed 10% of the private pension fund assets;
- All entities supervised by the FSA apply IT system security requirements. These were implemented by Rule no. 4/2018 on the management of operational risks generated by IT systems used by entities, authorized / endorsed / registered, regulated and / or supervised by the Financial Supervisory Authority, according to which supervised non-bank financial entities submit self-assessments of IT risks and IT audit reports (whose frequency differs depending on the risk class in which each entity falls) to FSA on an annual basis.

8.2. Recommendations of the National Committee for Macroprudential Oversight

In the current economic and financial context, characterized by several uncertainties due to the COVID-19 pandemic, the National Committee for Macroprudential Oversight issued two recommendations applicable to the Financial Supervisory Authority:

NCMO Recommendation no. R/5/2020 on the implementation of Recommendation ESRB/2020/7 on restrictions on dividend distributions during the COVID-19 pandemic by which it is recommended that the National Bank of Romania and the Financial Supervisory Authority request financial institutions in their supervision area to avoid, at least until January 1, 2021, any of the following actions, which have the effect of reducing the quantity or quality of own funds at consolidated and/or individual level:

a) make a dividend distribution or give an irrevocable commitment to make a dividend distribution;
b) buy-back ordinary shares;
c) create an obligation to pay variable remuneration to a member of a category of staff whose professional activities have a material impact on the financial institution's risk profile.

The financial institutions supervised by the FSA that are subject to the ESRB recommendation are: insurance companies, investment firms and central counterparties.

Based on the applicable legal provisions[38], the Financial Supervisory Authority issued a set of *Recommendations for insurance and reinsurance companies on certain measures to minimize the effects of the COVID-19 crisis*, taking into account: the need to maintain a sufficient level of own funds in order to contribute to the systemic risk mitigation and to support the economy; the negative effects that the COVID-19 crisis could have on the solvency of companies by decreasing underwritings and increasing liabilities due to the maintaining of low interest rates, respectively by the low return on assets.

Out of a total of 26 insurance-reinsurance companies, approximately 83% complied with the recommendations issued by FSA, and 15% expressed the intention to comply.

Table 46 Situation of Recommendations issued by FSA for insurance and reinsurance companies

Recommendations	Number of companies	
	Complied	Intend to comply
Recommendation 1: Insurance and reinsurance companies should update their capital management policy and provide for measures to be taken in order to maintain an adequate level of capital.	18	8
Recommendation 2: Insurance and reinsurance companies should assess the effects of the COVID 19 crisis on the quality and quantity of own funds covering SCR and MCR.	23	3

[38] The competence of the Financial Supervisory Authority provided in art. 6, para. (1) and (4) of *Law 237/2015 on the authorization and supervision of the insurance and reinsurance activity, with subsequent amendments and supplements* to supervise insurance companies so as to contribute to the maintaining of the insurance market stability and policyholders protection

Recommendation 3: If the assessment provided for in Recommendation 2 shows that the quantity and quality of own funds may be affected, insurance companies should apply the following measures: a) To postpone or not to distribute dividends, including not to undertake firm commitments regarding their distribution	23	2
b) Not to buy-back ordinary shares.	24	1
Recommendation 4: If the assessment provided for in Recommendation 2 shows that the quality and quantity of own funds covering SCR and MCR may be affected, insurance and reinsurance companies should update the remuneration policy and postpone the payment of variable remuneration to persons who may undertake, on behalf of companies, risks that have a significant impact on their risk profile.	20	5

The investment firms (IF) had own funds clearly superior to the minimum capital requirements for the category of financial services provided. The average multiple at market level in 2019 was 4.39. Also, out of a total of 18 IFs, a number of 14 IFs made profit in 2019, the cumulative value of their profits being about Lei 27.56 million. The cumulative loss of the 4 IFs that had negative results was approximately Lei 2.46 million.

Of the 14 firms that recorded profit in 2019, only 7 firms could have distributed dividends from the obtained profit, the other companies recorded losses in previous years, losses that will be covered from current and future profits. Of these 7, only two companies notified FSA of the GMS decision to distribute the profit.

Regarding the recommendations on the prohibition of ordinary shares buy-back and the undertaking of the variable remuneration payment, these measures do not have a significant impact on the investment firms in Romania.

The recommendation will be applied individually, if there are indications that investment fims do not comply with or will not meet the capital requirements in the next 12 months.

NCMO recommendation no. R/4/2020 on the implementation of the Recommendation ESRB/2020/8 on monitoring the implications for financial stability of measures on credit moratoria, public guarantee schemes and other fiscal measures taken to protect the real economy in response to the COVID-19 pandemic, *states as follows*:

a) For the characteristics and implementation of the measures: volume; type of financial support (debt moratoria, loan guarantees, subsidized loans or equity participations), their beneficiaries and the eligibility conditions; duration; information on the application of the measure (for example the volume of applications received and accepted);

b) For implications on financial stability: flow of credit to the real economy; liquidity, solvency and indebtedness of the non-financial sector; prudential soundness of financial institutions, including trends observed and expected in terms of non-performing loans and ability to meet liquidity and capital requirements.

The Financial Supervisory Authority has adopted a series of micro-prudential measures in response to the COVID-19 pandemic, which are not of a fiscal nature and are not subject to the NCMO Recommendation:

- Extension of reporting deadlines for the insurance market;

- Recommendations regarding the transparency of issuers;
- Use of electronic means of communication;
- Reduction by 25% of all fees charged by the FSA during the state of emergency;
- Introducing the possibility of activating exceptional tools for participants in the investment fund industry;
- Issuing alerts on cyber risk;
- Temporary derogation from the maximum threshold on investments in government securities for private pension funds.

At the same time, the fiscal measures adopted by the Romanian Government do not directly target the entities regulated by the FSA.

The Financial Supervisory Authority permanently applies *NCMO Recommendation no. R/4/2018* regarding the implementation of the macroprudential instruments for fulfilling the intermediate objectives included in the General Framework regarding the strategy of the macroprudential policy of the National Committee for Macroprudential Oversight.

9. Perspectives for the Romanian non-bank financial markets in the European context

9.1. Digital Finance legislative proposals

The European Commission has recently adopted the "Digital Finance Package", which includes the Digital Finance and Retail Payments Strategies of the European Commission, as well as legislative proposals on crypto-assets and digital operational resilience.

The Commission has proposed for the first time a new legislation on crypto-assets (a digital representation of values or rights that can be stored and traded electronically) - the Regulation of Markets in Crypto-Assets (MiCA). This regulation aims to provide legal clarity and certainty to issuers and providers of crypto-assets, in other words to help capitalize on opportunities and reduce risks in this new field.

The Commission also proposes a pilot regime for market infrastructures that intend to trade and settle transactions with financial instruments in the form of crypto-assets. The pilot regime is a so-called "sandbox" approach - or controlled environment - that allows temporary derogations from existing rules, so that regulators gain experience in using the distributed ledger technology in market infrastructures, while ensuring that they can deal with risks to investor protection, market integrity and financial stability.

Another major legislative proposal is the Digital Operational Resilience Act (DORA), which aims to mitigate cyber-attacks and improve the supervision of outsourced services.

Technology companies are becoming increasingly important in the field of finance, both as IT providers for financial firms and as providers of financial services. The proposed legislation aims to ensure that entities can withstand a multitude of disruptions and threats related to information and communication technologies.

Proposal for a Regulation on Markets in Crypto assets (MiCA)

In this context, the European Commission's legislative proposal on crypto assets aims to capitalize on the opportunities offered, while reducing risks for investors and consumers. The current EU and Member States legislative framework for crypto assets is very fragmented, but a fundamental distinction is drawn between, on the one hand, crypto assets with "securities characteristics", which are subject to laws on financial instruments, and, on the other hand, crypto-currencies, utility tokens and other crypto assets that do not have "securities characteristics" and thus are not regulated. The purpose of the proposed regulation is to address this difference by introducing a new legislative framework applicable to crypto assets that are not financial instruments.

The regulation defines crypto assets as "a digital representation of the value or rights that can be transferred and stored electronically, using Distributed Ledger Technology (DLT) or similar technology". Based on this general definition, the regulation introduces three types of crypto assets: (i) utility token - crypto assets that provide digital access to a good or service, available on DLT, and that are accepted by the issuer of that token; (ii) asset-referenced tokens, also known as

"stablecoins" – crypto-currencies that seek to maintain a stable value by reference to the value of several fiat currencies, one or several commodities or one or several crypto-currencies, or a combination of these assets, and (iii) e-money tokens - crypto assets whose main purpose is to be used as a means of exchange and which maintain a stable value by reference to the value of a fiat currency.

The aim of the legislative proposal is to provide uniform requirements for issuers of crypto-and for crypto-asset service providers.

Issuers of crypto assets will be required to publish a document with standardized information (crypto-assets white paper) that includes a detailed description of the issuer and of its project as well as the type, terms and characteristics of the crypto assets offered to the public. For asset-referenced token issuers ("stablecoins"), the regulation sets out several additional requirements: they must be authorized by the competent national authorities to issue such tokens, except for some minimum issues, and be established in the EU. Such issuers must have sound governance rules, maintain complaints procedures and ensure that board members have an appropriate behavior. In addition, they will have to comply with own funds requirements. With regard to the issuance of e-money tokens, this will only be allowed to credit institutions or electronic money institutions.

Under the regulation, any individual providing services related to crypto assets must apply for authorization, and its obtaining is conditional on registration as a legal entity in a EU Member State. As with crypto asset issuers, crypto-asset service providers must adhere to certain capital requirements, governance requirements and provisions related to the outsourcing of operational functions. The proposed definition of "crypto asset services" is modeled according to the list of "financial services" in the MiFID (Markets in Financial Instruments Directive).

Proposal for a Regulation on a pilot regime for market infrastructures based on distributed ledger technology (DLT)

The European Commission has proposed a pilot regime to allow regulated institutions to develop DLT-based market infrastructures for securities trading, custody and settlement. Although there are several advantages in adopting distributed ledger technology in regulated markets (eg, common and reliable data source, improved resilience, transparency and potential for automation), to date, DLT technology is underused, the legislative uncertainty being one of the impediments.

Thus, the European Commission considered three options - optional guidelines, targeted amendments to EU financial regulations and a pilot regime for the creation and testing of DLT market infrastructures, opting for the latter in the end.

Entities eligible for the proposed pilot regime are investment firms and market operators in order to establish a DLT multilateral trading facility and central securities depositaries so as to operate as DLT securities settlement systems.

In order to participate in this pilot program, entities must request authorization from the competent national authorities, which in turn will need to consult with ESMA in the decision-making process.

The regulation sets out the basic requirements for the operation of these DLT market infrastructures, which are similar to traditional market infrastructures. However, exceptions may be granted to certain requirements that may be problematic in the context of distributed ledgers. The

pilot regime imposes additional requirements on operators in order to control the new forms of risk represented by the use of DLT - in terms of information, cyber security and custody agreements.

Only securities that meet the following conditions may be admitted to trading on a multilateral DLT trading facility or registered in a DLT securities settlement system: shares, whose issuers have a market capitalization of less than EUR 200 million; or public bonds other than sovereign bonds, covered bonds, corporate bonds, , with a value of less than EUR 500 million.

After a period of 5 years (at least), ESMA will present a report to the European Commission, which will decide: whether the pilot program will be maintained or amended; whether the regime will be extended to new categories of financial instruments; whether amendments to EU law are taken into account; and whether the pilot regime ends.

Proposal for a Regulation on digital operational resilience for the financial sector (DORA)

The European Commission has presented a proposal for a regulation aimed at the operational resilience of the financial sector increasingly dependent on information and communication technology (ICT), aiming to ensure that the financial system can cope with security threats and ICT third party providers to be adequately monitored. The regulation will have a wide scope, including both banks and payment institutions, electronic money institutions, investment firms, crypto-asset service providers, trading venues, investment management companies, payment service providers, data reporting, (re) insurance companies, intermediaries, pension providers, rating agencies and audit companies.

- ICT risk management: DORA requires financial institutions to have internal governance and control rules for ICT risks. Financial institutions are required to create and maintain an ICT risk management framework that is robust, comprehensive and well documented. This includes the obligation for financial institutions to keep ICT systems, protocols and tools up to date and to identify potential sources of ICT risks. The proposed regulation sets out prescriptive measures that financial institutions must comply with for the protection, prevention, detection, response and recovery from ICT risks.
- ICT incidents: DORA requires financial institutions to establish and implement ICT incident management processes: identification, monitoring and classification of ICT incidents. Such a process will allow the classification of ICT impacts according to a set of criteria to be developed by the ESA Joint Committee. Financial institutions will be required to report all ICT incidents to the competent authorities.
- Digital operational resilience test: in order to manage ICT risks, financial institutions will implement digital operational resilience testing programs.
- Risk management of ICT third party service providers: the regulation sets out 11 principles that financial institutions must follow to manage these risks related to: financial institutions' responsibilities, proportionality, third party ICT service provider risk strategy, documentation and registration, pre-contractual analysis, information security, audits and exit strategies. The rights and obligations of the financial institution and ICT third-party service providers must be well allocated and set out in a contractual agreement. Among other obligations, financial institutions will conduct preliminary assessments of the concentration risk of these ICT service providers. The draft regulation establishes a separate set of legal provisions applicable to critical ICT third-party service providers, which will be appointed by the ESA Joint Committee. The aim is

to create a supervisory framework for critical ICT service providers, which will verify the existence of clear, comprehensive and effective rules, procedures and agreements of critical providers, so as not to affect other entities and financial stability.

9.2. Financial inclusion of the non-bank financial market in Romania

Recently, the topic of financial inclusion has gained increasing attention, amid international frameworks and policies dedicated to companies, inclusive financial systems, sustainable and inclusive growth.

The literature has defined the financial exclusion in the context of a bigger problem, the one related to the social exclusion of certain groups of individuals from the majority trend of the society. Thus, the definitions of financial inclusion or exclusion indicate that financial exclusion occurs mainly in individuals on the fringes of society. One of the issues that has arisen in academic circles is whether economic development leads to an inclusive financial system. Even developed financial systems, such as those in the US and the UK, have failed to be inclusive and certain segments of the population remain outside formal financial systems.

Various approaches have been proposed in the literature, including the use of a variety of financial inclusion dimensions for econometric estimation. Sarma (2008) proposes a financial inclusion index (FII), which is built on the following criteria: the index should include information on as many aspects of financial inclusion as possible; be easy and simple to calculate and be comparable between countries. The FII takes values in the range [0,1], where the value zero indicates the lowest financial inclusion and the value 1 indicates a full financial inclusion. Sarma argues that such a measure can be used to compare levels of financial inclusion in economies and provinces at a given time. The FII can be used to monitor the progress of policy initiatives for financial inclusion in a country over a period of time. Such a measure may also be useful in addressing questions of academic interest that have been presented in the financial inclusion literature.

The data series used to build the financial inclusion indicator (FII) were taken from the websites of the World Bank, the European Funds and Assets Management Association (EFAMA), the European Insurance and Occupational Pensions Authority (EIOPA), Eurostat and the Financial Supervisory Authority (FSA), and the period under analysis is 2010-2019.

The following table describes the main indicators analyzed:

Table 47 Description of variables

Description of variables	Source
Insurance penetration rate	World Bank, ASF
Insurance density	World Bank, ASF
Total assets from financed and private pension plans, as % of GDP	EIOPA, ASF, Eurostat
Total net assets of UCITS (EUR million / GDP)	EFAMA, ASF, Eurostat
Number of commercial bank branches per 100,000 adults	World Bank
Outstanding deposits with commercial banks (% of GDP)	World Bank

Number of ATMs per 100,000 adults	World Bank
Outstanding loans from commercial banks (% of GDP)	World Bank
Number of debit cards per 1,000 adults	World Bank

Source: FSA calculations

The Financial Inclusion Index (FII) is a multidimensional index that captures information about various dimensions of financial inclusion in a single digit between 0 and 1, in which the value 0 denotes complete financial exclusion and the value 1 indicates complete financial inclusion in an economy.

The methodology proposed by Sarma (2008) was used, which allows the incorporation of information on as many aspects (dimensions) of financial inclusion as possible.

The FII is first composed by calculating a size index for each dimension of financial inclusion.

The following formula is given:

$$\boldsymbol{d_i = \frac{A_i - m_i}{M_i - m_i}} \qquad (1)$$

Where:

$\boldsymbol{A_i}$ = Initial value of dimension i;

$\boldsymbol{m_i}$ = Minimum value of dimension i;

$\boldsymbol{M_i}$= Maximum value of dimension i.

$$\mathbf{0 \leq d_i \leq 1}$$

A country (i) will be represented by a point D_i = $(d_1, d_2, d_3, \dots d_n)$, where n is the dimension of financial inclusion for country i.

The point O = (0,0,0, ... 0) represents the point that indicates the worst situation.

Point I = (1,1,1, ..., 1) represents the greatest achievement in all dimensions.

FII is measured by the normalized inverse Euclidean distance of the point D_i from the ideal point I = (1,1,1, ... 1).

The index formula used is:

$$\boldsymbol{IIF = 1 - \frac{\sqrt{(1 - d_{1)}{}^2 + (1 - d_{2)}{}^2 + \cdots + (1 - d_{n)}{}^2}}{\sqrt{n}}} \qquad (2)$$

Depending on the FII value, countries are classified into three categories:

FII interpretation	
0,5 < IIF ≤ 1	high financial inclusion;
0,3 ≤ IIF < 0,5	average financial inclusion;
0 ≤ IIF < 0,3	low financial inclusion.

According to those mentioned in Table 2, for a FII value in the range (0.5, 1) it can be said that the country has a high level of financial inclusion, for a FII value in the range [0.3, 0.5) an average

financial inclusion can be confirmed, and for a FII value in the range [0, 0.3), the country has a low level of financial inclusion.

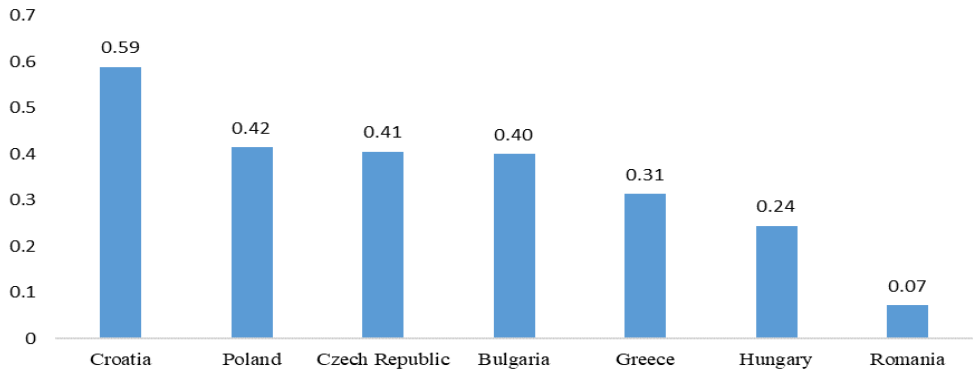
Therefore, the financial inclusion index (FII) is a multidimensional index that captures information about various dimensions of financial inclusion in a single digit between 0 and 1, if a value close to 0 is recorded, it indicates the absence of full financial inclusion, and a value as close as possible to 1 indicates full financial inclusion in an economy

Taking into account the availability of data provided by the IMF and the desire to include as many dimensions as possible in the research, it was decided to build the financial inclusion index for the end of 2018.

The methodology proposed by Sarma (2008) was applied both for the banking sector and for non-bank financial markets, which allowed the incorporation of information on as many aspects (dimensions) of financial inclusion as possible.

The attention was directed to the study of inclusion for the banking and non-bank financial sectors, the main purpose being to identify in relation to different countries, the level of financial inclusion of Romania. Next, the calculation of the inclusion index will include both part of the banking segment and of the non-bank financial sector.

Figure 119 Financial inclusion index - 2018 for banking & non-bank financial markets (insurance market, private pensions market and UCITS)



Source: FSA, IMF, OECD, EFAMA calculations

According to the chart, in the FII calculated for the banking financial markets & the insurance market, the private pension market and the UCITS, the following countries were taken into account: Croatia, Poland, the Czech Republic, Bulgaria, Greece, Hungary and Romania. Among the selected countries, Romania ranks last, with an index value of 0.07, and is therefore considered a country with a low level of financial inclusion. As previously presented, this low value can be motivated by a still very small size of non-bank financial markets in Romania, where the share of total assets in GDP at the end of 2018 was 12.82% of GDP, and the share of the banking sector was 56.83% of GDP.

In calculating the inclusion index for the non-bank market, the following dimensions of inclusion were taken into account:

- Number of commercial bank branches per 100,000 adults
- Number of ATMs per 100,000 adults
- Outstanding deposits with commercial banks (% of GDP)
- Number of debit cards per 1,000 adults

- Insurance penetration rate
- Insurance density
- Total assets from funded and private pension plans, as % of GDP
- Total net assets of UCITS (EUR million / GDP).

Another calculation of the financial inclusion index is found in chart 2, which took into account the size of the banking financial markets and the insurance market, for the period 2014-2018.

This time we tried to include a larger number of countries in the FII calculated for the banking financial markets & the insurance market, so we took into account the countries: Slovenia, Croatia, Bulgaria, Greece, Poland, Montenegro, Slovakia, Republic Czech Republic, Estonia, Latvia, Turkey, Bosnia and Herzegovina, Hungary, Romania, Serbia, Lithuania, Kosovo and Albania.

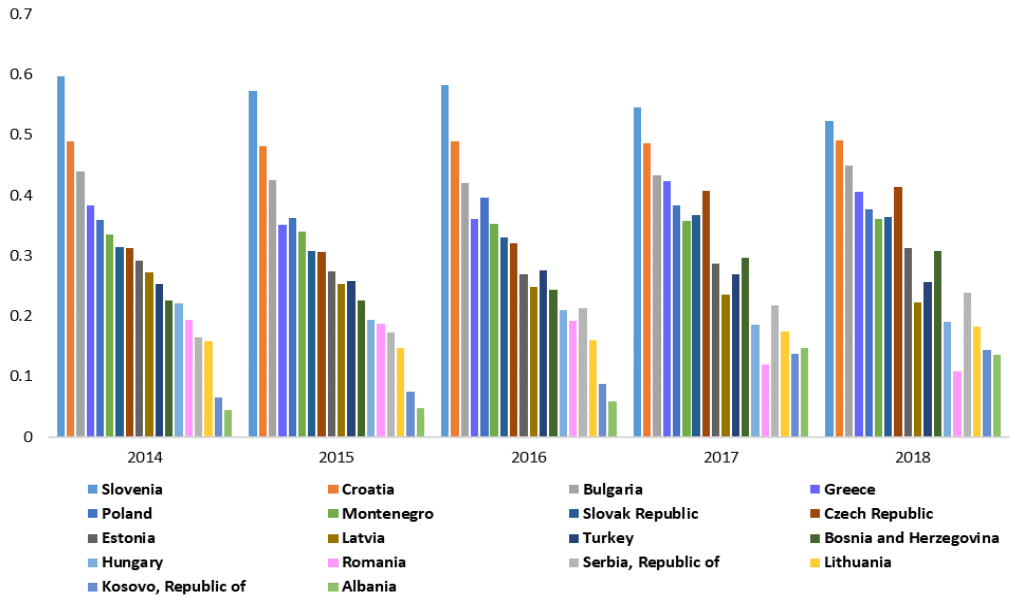
Dimensions for the FII calculation are:

- Number of commercial bank branches per 100,000 adults
- Number of ATMs per 100,000 adults
- Outstanding deposits with commercial banks (% of GDP)
- Insurance penetration rate
- Insurance density

At the level of Romania, the insurance market sector is the smallest of all three non-bank financial markets, in terms of total assets in GDP, at the end of March 2020 registering a share of 2.29% of GDP. The assets of the insurance-reinsurance sector were at the end of 2019 of Lei 22.2 billion, decreasing slightly compared to 2014 (3.16%). On the other hand, there is a slight increase in the first quarter of 2020 (2.29%) compared to the fourth quarter of 2019 (2.09%).

The insurance market in Romania is dominated by the non-life insurance segment, where it represents approximately 81% (H1 2020) of the total gross written premiums, compared to the insurance markets in other European countries being mainly life insurance, representing a specific feature of the market insurance in Romania.

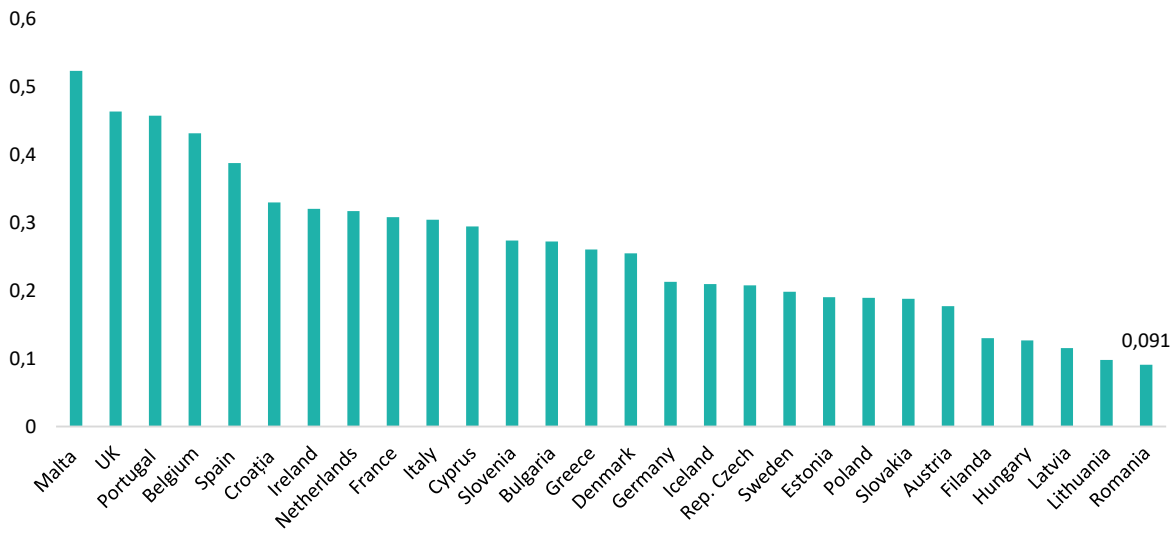
Figure 120 Financial inclusion index for banking financial markets & insurance market 2014-2018



Source: FSA, IMF calculations

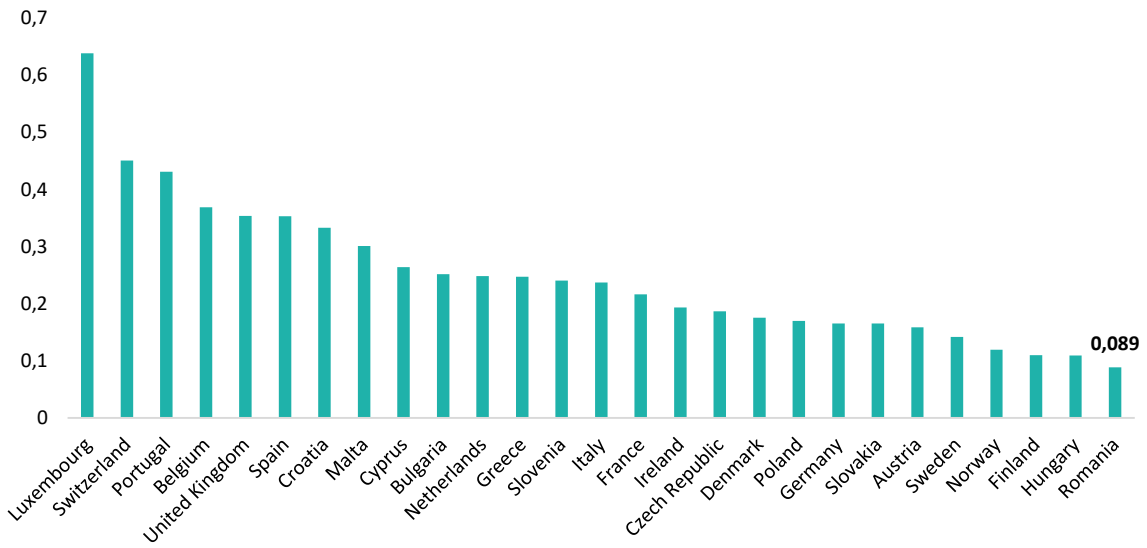
According to those presented in graphs 2, 3 and 4, Romania registers during the period 2014-2019 a value of the inclusion index between [0.08 - 0.193], in which the size of the banking market and the insurance market, respectively UCITS, was strictly introduced. The highest value of FII for Romania was identified in 2016 (0.193), which is motivated by a slightly larger size of the insurance market in 2016, the total value of assets as a share of GDP being 2.75 %, significantly higher compared to the other years studied. According to the index calculation methodology, Romania ranks in the group of countries with a low level of financial inclusion.

Figure 121 Financial Inclusion Index (IIF) - Banking Financial Markets & Insurance Market 2019



Source: FSA, IMF, OECD, EFAMA calculations

Figure 122 Financial Inclusion Index (IIF) – Banking Financial Markets and UCITS 2019



Source: FSA, IMF, OECD, EFAMA calculations

Financial inclusion is a key element of economic development and poverty reduction and can also be a way to prevent social exclusion. Therefore, increasing financial inclusion or reducing involuntary financial exclusion diminishes income inequality. In order to further reduce income inequality

additional measures must be taken in order to combat the financial exclusion of low-income groups from financial services.

In addition, it is stated that the size of the non-bank financial sector is closely correlated with a country's level of financial inclusion. Therefore, a diminished level in the size of the insurance, capital and private pension markets will automatically lead to a low level of access to financial products and services for a certain social class of the population, leading to a very low rate of financial inclusion.

Financial inclusion can contribute significantly to the increase and diminution of poverty and inequality, in particular by providing households and businesses with access to the resources needed to finance consumption and investment and to insure against shocks. In addition, financial inclusion can boost the workforce, in turn contributing to increased government revenue and the strengthening of the social security system.

9.3. Sustainable finance and green economies

The European context on green economies and sustainable finance

At the end of 2019, the European Commission issued a communique on the European Green Deal reiterating the Commission's commitment to responsibly address climate and environmental issues through a new growth strategy aimed at transforming the EU into a fair and prosperous society with a modern, competitive and resource efficient economy, with zero net emissions by 2050 and where economic growth is decoupled from resource use. In this context, the role of the financial market, both banking and non-bank, will be important by ensuring the financing of environmentally sustainable economic projects. In the mid to long term, institutional investors (investment funds, insurance companies, private pension funds) will be involved in implementing this green strategy. Also, public investments will be channeled to sustainable projects.

The current economic paradigm has shown it produces strong and difficult reversible effects on climate, biodiversity and environmental quality (through pollution, with major effects on health and life expectancy).

Thus, it is necessary to create a sustainable economy without negative impact on the environment. At the same time, it would be ideal for this new economic model to eliminate inequalities and poverty as much as possible.

Traditionally, both the financial system and the business environment have a short-term orientation from the perspective of profitability. Thus, although the interest of investors and shareholders is long-term, the system of rewards and calculation of returns favors a short-term vision for two reasons:

- Compensation packages for the management of financial and non-financial companies are related to short-term performance;
- The value created in the more distant future becomes less relevant in the calculation of returns due to discount factors.

In this context, harmonizing the long-term interests of investors and shareholders with the investment and business behavior of economic actors is an important challenge.

The European Union has taken a pioneering role, setting itself the goal of becoming the first climate-neutral continent by 2050 by adopting the European Green Deal. At the same time, it sets ambitious targets by 2030:

- A reduction of at least 40% in greenhouse gas emissions compared to 1990 levels
- Use of at least 32% renewable energy as a percentage of final consumption
- Achieving energy savings of at least 32.5% compared to the "business-as-usual" scenario

Sustainable financing is the inclusion of environmental, social and governance factors by in the investment decision-making process of the financial sector. The European Union has set out to build a financial system that supports a sustainable economy.

The need for additional investment to reach the 2050 target has been estimated at between EUR 175 and 290 billion per year.

For the targets set by 2030, the European Union estimates that EUR 1,000 billion in investment is needed in sustainable projects. These amounts are beyond the powers of the public sector - for this reason, the financial sector will play a key role in:

- Reorientation of investments towards sustainable technologies and businesses;
- Financing long-term sustainable economic growth;
- Contributing to the creation of a circular economy with a small carbon footprint.

The *European Union's Action Plan on Sustainable Finance* contains 10 initiatives grouped into three chapters, some of which have already been implemented:

I. Reorientation of capital flows towards a more sustainable economy

1. Establishing a clear, detailed and uniform taxonomy at European level for the classification of sustainable activities (*EU Regulation 2020/852 on the establishment of a framework to facilitate sustainable investment*).
2. Creating a EU Green Bond standard - according to the recommendations of the expert group set up for this project, the standard being voluntary and will encourage financial institutions to issue financial products in accordance with it.
3. Promoting investment in sustainable projects - The European Union aims to make investments of at least EUR 1,000 billion in sustainable projects by 2030. Of this amount, EUR 100 billion will be invested during the period 2021-2027 to support the regions and individuals most impacted by the transition to a green economy.
4. Incorporating sustainability into financial advice - investment firms will need to provide clients with information on the risks and opportunities of social and environmental investments.
5. Development of sustainability benchmarks by amending *EU Regulation 2016/1011 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds.*

II. Inclusion of sustainability elements in risk management

6. Better inclusion of sustainability in the rating process and in market research - ESMA has revised the guidelines on disclosure requirements for ratings.

7. Clarification of the duties of asset managers and institutional investors regarding sustainability - *EU Regulation 2019/2088 on information on sustainability-related disclosures in the financial services sector* was adopted, which details the reporting obligations for the providers and distributors of financial products and services to customers on the impact of sustainability on the profitability of investments as well as on the impact of investments made on sustainability. This Regulation shall become applicable as of March 2021.
8. Introduction of an "green supporting factor" in EU prudential rules for banks and insurance companies.

III. Encouraging transparency and long-termism

9. Strengthening sustainability disclosures and accounting rules making in non-financial reporting.
10. Promoting sustainable corporate governance and mitigating short-termism in capital markets - EBA, ESMA and EIOPA have recommended strengthening the disclosures of environmental, social and governance factors in order to alleviate pressures on financial markets generated by short-term investment approaches.

Recovery plan for Europe

In order to help remedy the economic and social damage caused by the COVID-19 pandemic, to help the economy recover and to protect jobs, the European Commission has launched an important recovery plan for Europe, based on using the full potential of the EU budget, maintaining its full commitment to materialize the initiatives on the green and digital double transition that are essential for the future.

Most of the proposed recovery measures will be implemented through the new temporary recovery instrument "Next Generation EU", with a financial capacity of EUR 750 billion. It is based on three pillars:

- tools to support Member States' efforts to recover, repair the consequences of the crisis and emerge stronger from this challenge;
- measures to stimulate private investment and to support companies in difficulty;
- strengthening key EU programs to build on the lessons learned from the crisis, increase the strength and resilience of the single market and accelerate the dual green and digital transition.

On October 9, 2020, EU ambassadors agreed on the Recovery and Resilience Facility, a new instrument that provides Member States with financial support to step up investment and public reform as a consequence of the COVID-19 pandemic crisis. The facility, for which EUR 672.5 billion has been allocated, is at the heart of the EU's extraordinary recovery efforts, represented by the Next Generation EU - the EUR 750 billion plan. The recovery and resilience facility will help Member States address the economic and social impact of the COVID-19 pandemic, while ensuring that their economies make the green and digital transition, becoming more sustainable and resilient.

Implications for the Romanian financial market

Romania is no exception to long-term European trends in promoting sustainable financing. Climate risk has been recognized at European and national level as having the potential to create medium-

and long-term vulnerabilities to the financial system and to the real economy. In this context, the orientation of financial resources towards areas that protect the environment could contribute to the reduction of climate risk and implicitly of the potential losses caused by its materialization. The competitiveness of the real economy at regional level is important, and a transition to low carbon should be made in an efficient way, so as not to generate trade losses or to miss opportunities to attract investment flows aimed at financing sustainable projects.

Given the need to identify climate-sustainable financial solutions in order to reduce the negative effects caused by the materialization of climate risk on the real economy and on the financial system, as well as to identify and exploit the opportunities that the transition to an environmentally-sustainable economy can bring, the National Committee for Macroprudential Oversight has set up a **Working Group to support green funding**, in line with national objectives as well as with European principles. The members of the working group are representatives of the National Bank of Romania, of the Financial Supervisory Authority, along with a wide range of stakeholders, both from the private and public sectors.

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List of abbreviations

ARIS	=	Absolute Return Innovative Strategies
AIF	=	Alternative Investment Funds
ATS	=	Alternative Trading System
BSE	=	Bucharest Stock Exchange
CASCO	=	Casualty and Collision Insurance
CMU	=	Capital Markets Union
CD	=	Central Depository
CEIF	=	Closed - End Investment Funds
CIP	=	Consumer Price Index
CIU	=	Collective Investment Undertaking
DB	=	Defined Benefits
DC	=	Defined Contributions
DLT	=	Distributed Ledger Technology
DORA	=	Regulation on Operational Resilience for the Financial Sector
EA	=	European Economic Area
EBRD	=	European Bank for Reconstruction and Development
ECB	=	European Central Bank
EC	=	European Commission
EGS	=	Environmental, Governance, Social
EFAMA	=	European Fund and Asset Management Association
EIOPA	=	European Insurance and Occupational Pensions Authority
ESMA	=	European Securities and Markets Authority
ESRB	=	European Systemic Risk Board

EU	=	European Union
ETF	=	Exchange Traded Funds
FII	=	Financial Inclusion Index
FIC	=	Financial Investment Company
FSI	=	Financial Stress Index
FSA	=	Financial Supervisory Authority
FoS	=	Free Movement of Services
FoE	=	Freedom of Establishment
GMS	=	General Meeting of Shareholders
GEM	=	Government Emergency Ordinance
GCP	=	Gross Claims Paid
GDP	=	Gross Domestic Product
GWP	=	Gross Written Premiums
HICP	=	Harmonized Index of Consumer Prices
COVID-19	=	Infectious disease caused by the most recently discovered coronavirus
IF	=	Investment Firms
ICT	=	Information and Communication Technology
IT	=	Information Technology
IMF	=	International Monetary Fund
IMC	=	Investment Management Company
ICF	=	Investor Compensation Fund
LI	=	Life Insurance
MCR	=	Minimum Capital Requirements
MiCA	=	Regulation on Markets in crypto-assets
MPF	=	Ministry of Public Finance

MTPL	=	Motor Third Party Liability Insurance
MTS	=	Multilateral Trading System
NBR	=	National Bank of Romania
NIS	=	National Bureau of Economic Research
NCSP	=	National Commission for Strategy and Prognosis
NCMO	=	National Committee for Macroprudential Oversight
NIS	=	National Institute of Statistics
NSC	=	National Securities Commission
NAV	=	Net Assets Value
OEIF	=	Open-End Investment Funds
OECD	=	Organization for Economic Cooperation and Development
OPEC	=	Organization of the Petroleum Exporting Countries
PGF	=	Policyholders Guarantee Fund
PPSRGF	=	Private Pension System Rights Guarantee Fund
SME	=	Small and Medium Enterprises
SCR	=	Solvency Capital Requirements
UCITS	=	Undertakings for Collective Investment in Transferable Securities
US FED	=	United States Federal Reserve System
US	=	United States of America
VAT	=	Value Added Tax
VPF	=	Voluntary Pension Fund

Insurance classes

Non-life insurance

A1 -Accident

A2- Sickness

A3- Land vehicles, other than railway rolling stock

A4- Railway rolling stock

A5- Aircraft

A6- Ships (sea, lake and river and canal vessels)

A7- Goods in transit

A8- Fire and natural forces, other than property included in classes 3, 4, 5, 6 and 7

A9- All damage to or loss of property, other than property included in classes 3, 4, 5, 6 and 7, due to hail or frost, and any event such as theft, other than that included in class

A10- Motor vehicle liability arising out of the use of motor vehicles operating on the land, including carrier's liability

A11- Aircraft liability arising out of the use of aircraft

A12- Liability for ships (sea, lake and river and canal vessels) arising out of the use of ships, vessels or boats on the sea, lakes, rivers or canals, including carrier's liability

A13- General liability, other than those referred to in classes 10, 11 and 12

A14- Credit

A15- Suretyship

A16- Miscellaneous financial loss

A17- Legal expenses and costs of litigation.

A18- Assistance for persons who get into difficulties while travelling, while away from their home or their habitual residence

Life insurance

C10- Life insurance, annuities and supplementary life insurance

C2 - Marriage assurance, birth assurance

C3- Life insurance and investment funds annuities

C4- Tontines

C5- Capital redemption operations, based on actuarial calculation

C6- Management of group pension funds

C7- Operations related to length of human life, in accordance with social insurance legislation

A1 – Accidents

A2- Sickness

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