The Growing Importance of the Economic Role of the Corporate Bond Market*

Attila Bécsi – Gergely Bognár – Máté Lóga

The role of corporate bonds has expanded globally in the past decade, as they are an ideal financial instrument both for diversifying the liability structure of issuing companies and managing investors' portfolios. An adequately developed, liquid corporate bond market has a beneficial effect on the functioning and transparency of the market mechanisms of the economy and can also strengthen the crisis resilience of the financial system. Several studies have shown that – in addition to the normal functioning of companies – the issue of corporate financing is also important in crisis management, as uncertainty during a crisis has a negative impact on the liquidity of bank lending, limiting companies' funding options. In such a situation, it is therefore vital that companies can also rely on other forms of financing. Recognising this in the aftermath of the 2008–2009 economic crisis, central banks in a number of countries launched bond purchase programmes in order to start supporting the expansion of the corporate bond market. Thanks to the Bond Funding for Growth Scheme (BFGS) of the Magyar Nemzeti Bank (the Central Bank of Hungary, MNB), the Hungarian corporate bond market now offers a realistic financing alternative to bank loans for a wide range of companies.

Journal of Economic Literature (JEL) codes: G01, E52, E58, G15

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1. Introduction

The 2008–2009 global economic and financial crisis highlighted a number of structural problems in the financial system that need to be addressed in order to make markets more resilient in the event of another crisis. These include

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Attila Bécsi is an Analyst at the Magyar Nemzeti Bank. Email: becsia@mnb.hu
Gergely Bognár is an Analyst at the Magyar Nemzeti Bank. Email: bognarg@mnb.hu
Máté Lóga is a Director at the Magyar Nemzeti Bank. Email: logam@mnb.hu

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the importance of diversifying corporate funding, since means of financing that provide alternatives to bank loans, such as bond issuance, create additional opportunities for companies to access finance even in the event of reduced bank lending liquidity. Corporate bonds provide companies with predictable, long-term financing opportunities and also offer a number of additional benefits: funds raised through bonds do not necessarily require collateral and a specific debt purpose, and presence in the bond market demonstrates the transparency of the company that places the securities on the market, which may also be the first step towards a subsequent equity issue. In light of these advantages, this study assumes an increase in the value of the corporate bond market after the 2008–2009 crisis, and that the more diversified market emerging can show the extent to which the management of the Covid-19 crisis may be more effective compared to the previous crisis. In many economies, an advanced, liquid bond market can contribute to mitigating the effects of the economic downturn caused by the Covid-19 pandemic, especially if the central bank also appears on the buyer side.

The importance of the corporate bond market in financing is influenced by a number of factors, such as economic development, the efficiency of the capital market, the financial literacy of companies or even the regulatory and institutional environment that also provides for the protection of investors. By shaping the characteristics of a series of securities, a bond issue can be an extremely flexible financing instrument to achieve an optimal funding structure at the level of individual companies, while the spread of corporate bonds also has a positive macroeconomic impact. The corporate bond purchase programmes operated by central banks in major economies also demonstrate the importance that monetary policymakers attach to this instrument. *Section 2* of the study describes the general role of corporate bonds, followed by a report in *Section 3* on the state of play in global and regional bond markets, with a special emphasis on regional markets. *Section 4* examines central banks' corporate bond purchase programmes, while *Section 5* describes in detail the Hungarian corporate bond market and the Bond Funding for Growth Scheme. *Section 6* provides a summary of the main findings of the study.

2. General role of corporate bonds

2.1. Features of corporate bonds

A bond is a type of debt security with which various market participants (states, companies, banks) can raise funds for specific purposes. Under the terms of the bond agreement, the holders purchasing the security are entitled to the capital which is lent, the related nominal interest payment (*coupon*), and if the bond is transferable, they also have the right to sell it. The term to the maturity of a bond is called the maturity period, and is typically longer than that of bank loans. The debtor pays interest on predetermined dates as per the bond agreement, whereas principal repayments can either start on dates before maturity (*amortising bonds*), or occur at the maturity date in a single amount (*bullet bonds*). In general, there is a wide spectrum of bonds in the corporate bond market, but while less developed markets tend to be dominated by bonds of the simplest structure (*plain vanilla*), in more developed capital markets more complex products featuring a variety of options are also common.[1] In terms of the type of interest, a distinction is made between bonds issued with a fixed rate coupon and floating rate bonds.[2] In the latter case, payments on interest payment dates are made according to a reference rate and the associated *spread*.

The design of the features and parameters of bonds can make bond issues remarkably flexible and therefore attractive for companies, allowing them to raise funds in the way that is the most effective way for them individually.

[1] Bonds incorporating options (call, put) provide the possibility of redeeming or repurchasing securities at a predetermined price. Mention should also be made of *convertible bonds*, which can be converted into shares at certain times during the maturity period of the bond at a predetermined price, usually at the discretion of the bondholder.

[2] In addition, there are bonds with special interest rates, such as *"step-up"* bonds (with the initial rate fixed in advance, allowing subsequent variations during the maturity period), while a *"cap"* (maximum) and a *"floor"* (minimum) may also be used for payments of interest due. In bond markets, *"pay-in-kind"* bonds represent a special product, whereby, particularly for companies with lower credit ratings and in difficult financial situations, coupon payments are not made in cash, but by issuing new bonds at the company's discretion.

Table 1
Main benefits associated with bond financing

Aspect	Benefit offered by bonds
Investor base	The bond market attracts a broad range of domestic and foreign investors, allowing companies to raise a larger amount of funds compared to bank loans, without being restricted by banks' large borrower limits.
Collateral	An issuer may arrange for unsecured or secured funding; in the latter case the investor pool may typically be widened further.
Maturity period	Compared to (unsecured) bank loans, maturity periods tend to be longer, which supports longer-term, sustainable finance.[3]
Debt purpose	Bonds are usually not subject to a restricted debt purpose, and the funds can be used freely by the issuer.
Company size	Bond issues tend to be relied on by large corporations in their mature stage, but can also help a number of companies in their growth phase to realise their potential.
Pricing	Pricing on the corporate bond market can be an attractive alternative to bank loans. If competition develops between markets that ensure the supply of funds to firms, corporate sector funding costs may decline further.
Bank relationships	The bond market provides an opportunity to optimise bank relationships and to ease dependence on banks.
Crisis management	The bond issuer can access liquidity even when bank lending dries up. Funding may become faster, especially when a central bank enters the corporate bond market as a buyer.
PR considerations	A bond issue can improve the perception of the issuer on the stock exchange as it demonstrates more transparent operations, and therefore can, in practice, be considered as the antecedent to entering the equity market.
Rights	In the case of a call option, the company has the right to repurchase its bonds, which is ideally done when interest rates fall.
Retention of ownership and voting rights	In contrast to an equity issue, investors will not acquire ownership and voting rights when funds are raised through bonds, and therefore the profits and dividends of the company will only benefit its owners at the time.

As *Table 1* shows, there are a number of arguments in favour of bond issues for companies, but these can only be leveraged if the supply of the bonds to be issued meets investor demand. Investors often diversify their portfolios with corporate bonds, as in many cases this enables them to achieve an asset composition that is better suited to their investor profiles in terms of risk and return. Bonds can be an ideal financial instrument for those seeking to finance companies directly, as bond financing typically involves lower risks compared to providing finance via the equity market. *Distenfeld – Shah* (*2014*) argue in favour of this assumption, asserting that if US high-yield bonds were held in a portfolio at a rate of 25 per cent with the remaining three-quarters composed of shares represented by the S&P 500,

[3] In 2020, less than half of Hungarian corporate loans denominated in HUF matured over periods longer than 5 years, and even with loans denominated in EUR, loans with a maturity of more than 5 years accounted for only 50–60 per cent. By contrast, all of the corporate bonds issued under the MNB's Bond Funding for Growth Scheme had an original maturity of at least 7 years, and the average maturity weighted by total nominal value was 9.3 years.

the annual risk would be reduced from 15.2 per cent to 12.8 per cent, while yields would decrease only minimally, from 10.9 per cent to 10.7 per cent, based on data from July 1983 to December 2013.

In the case of bonds, investors' interest earnings and capital payments can be calculated more accurately, which is favourable from the perspective of financial stability considerations. Investors' risks mainly consist of bond price movements resulting from changes in market yields, since investors will incur a loss on the bond if the expected yield in the financial market increases. Another possible risk factor is when a bond is unsecured: by law, the holders of such bonds are classified in a lower rank of seniority compared to those of securities covered by collateral. Credit risk refers to the likelihood that the issuer will fail to repay the debt in full and on time. In more advanced markets, the creditworthiness of issuers and the credit risk of their bonds are assessed by credit rating agencies, classifying instruments into different categories. A fundamental difference exists between investment-grade bonds and speculative *high-yield* bonds. Many large institutional investors are only allowed to trade the former, and most of the pre-2020 central bank bond purchase programmes were primarily focused on the market for investment-grade bonds, which may result in a significant difference between the market liquidity of the two categories and the cost of raising funds with them.

Due to their nature, bonds may involve other types of risk such as foreign exchange risk, the risk arising from option features and liquidity risk; information on these risks can be gathered by the investor, inter alia, from the documentation of the bonds. Of these, liquidity risk is the risk that is most frequently addressed in the literature. Several surveys have pointed out the deteriorating trend of liquidity in secondary markets. US and European investment experts participating in a survey by the *CFA Institute* (*2016*) identified banks' capital and liquidity requirements as the main source of the problem and called for policy measures to remove market barriers to provide a remedy. By contrast, according to Asian respondents, encouraging small investor participation may be more important than improving the institutional investor market. *Hill et al.* (*2019*) primarily attribute decreasing liquidity to the legislation in force and extraordinary monetary policy action, while emphasising the phenomenon of undermining the market-creating liquidity model and arguing that it was chiefly explained by the increased capital requirements of brokers and traders. The problem of poor liquidity is not new. Even before the crisis, *Gyntelberg et al.* (*2005*) addressed the illiquidity of Asian secondary markets, identifying a narrow circle of investors, inadequate microstructures and lack of information on issuers as the causes.

2.2. Importance of the corporate bond market in the emergence of a diversified financial system

The corporate bond market is an important element of a sufficiently diversified, efficient financial market, as the demand for alternative methods of funding complementing bank lending has increased significantly over the past decade. Even before the 2008 global crisis, *Luengnaruemitchai – Ong* (*2005*) found that the diversification of corporate funding was a favourable process, especially in the event of banking crises, and primarily in some emerging countries. The favourable effects of the corporate bond market were also examined by *Hakansson* (*1999*), who found an advanced bond market to have a strong positive impact on the economy, given that the excessive prominence of bank credit in financing may reduce the return on invested capital due to lax lending criteria, which may ultimately lead to an increase in non-performing loans. Where the banking system and the bond market are balanced, market processes can function better, which reduces systemic risks and the risk of a potential crisis emerging. Examining corporate bond issues of the past 30 years, *Tendulkar and Hancock* (*2014*) concluded that the role of the bond market in the real economy had become increasingly important in recent decades, and since the crisis, bonds had been decisive in filling the gap between bank lending and long-term financing. According to the study, in the low-yield environment, the search for yield supports the liquidity of the bond market, but changes in the yield environment may produce both losers and winners. Addressing corporate bonds, a study by *ICMA* (*2013*) found that a wide range of market participants (investors, companies, governments) required the existence of an advanced, liquid bond market, given the potentially favourable effect it may have on economic growth by enabling production companies of primary importance to the real economy to find a stable, reliable channel of funding in the bond market, and allowing investors to generate predictable revenues. While smaller companies may be more active in domestic corporate bond markets, large corporations can also take advantage of the opportunities offered by the international bond market, which involves a wider range of institutional investors.

Lund et al. (*2018*) also see the growth of the corporate bond market as a positive phenomenon, with particular regard to its role in increasing transparency and improving market efficiency, as well as in risk management. Analysing the corporate bond market for property developers in Poland, *Gostkowska-Drzewicka* (*2014*) also underlines the advantages of bond issues: the issuer can raise significant funds via multiple bondholders, and this form of finance is particularly well suited for development projects, as the schedule of repayments and maturity are determined by the issuer, allowing it to redeem the bond using the revenues from investments which have already been completed. Another advantageous feature of bonds is that

the cost of capital may be lower compared to bank loans, especially when other clauses, such as the option of conversion into equity, are associated with the bond.

2.3. Importance of the bond market in the financial crisis

A sufficiently liquid, developed corporate bond market can play a meaningful role in the event of a financial crisis through its ability to dampen the crisis and shorten the recovery period. *De Fiore and Uhlig* (*2015*) found that declining bank liquidity due to the crisis drove non-financial corporations from the previously dominant bank loan financing to bond issues, although the costs of both forms of financing increased. Using a DSGE model, the authors concluded that, in a crisis, the most severe economic downturn occurs where bank financing is not able to provide a sufficiently flexible service to companies, and the capital market is simultaneously not available. The study argues that the potential negative impact of a crisis on the real economy, spilling over from the financial sector, can be mitigated if companies have flexible financing options and are able to choose between different methods of funding.

Gyntelberg et al. (*2005*) provide insight into the evolution of another region's bond market through the Asian financial crisis, analysing the situation of the Asian market, which shows significant variations from country to country. According to the authors, since the 1997 Asian financial crisis the bond market has been a high priority for policymakers, who often see markets for local-currency bonds as a means to avoid a subsequent crisis, whereby the risks arising from individual currencies and maturities may be reduced. Differences can be observed in terms of the openness of bond markets: while some primary markets are open to foreign issuers, others (such as China, India or New Zealand) rely on quasi-government issuers. *Gormley et al.* (*2006*) claimed that in the 1998 South Korean crisis, the funds raised from the bond market accounted for almost all corporate financing, helping to allow households to participate in funding companies directly. The authors compare the role of the corporate bond market during the crisis to that of a spare wheel, although they emphasise that the funding opportunity provided by the bond market was primarily available to large corporations, resulting in a market that was much more concentrated than the credit market. Drawing lessons from the crisis, from the early 2000s onwards, policymakers in many Asian countries started to take notice of corporate bonds, recognising that a strong financial system needed a variety of funding channels in which banks and other types of investors compete for borrowers. As demonstrated by the Asian financial crisis, a lender panic hits short-term credit markets, whereas the corporate bond market can provide significant long-term financing to the economy, which has led to a necessary and significant growth in the primary market for corporate bonds.

The dynamic expansion of the bond market observed after the crises also raised the issue of sustainability. *Lund et al.* (*2018*) examined the continuous growth in the global stock of debt from 2008. Corporate bond issues increased 2.5 times over the preceding decade, creating a wider, deeper market in many countries. As other studies have shown, since the financial crisis many large corporations worldwide have moved towards bond financing because commercial banks have been holding back on lending. At the time of the publication of the research, about 20 per cent of global corporate debt was held in the form of bonds, almost double the ratio from 2007. According to the authors of the study, the deepening of the corporate bond market and the diversification of corporate financing have a positive effect on global financial markets, but also pose risks, as the stock of non-investment grade bonds almost doubled between 2007 and 2017, reaching USD 1.7 trillion for companies in developed countries. The study also highlighted the fact that between 2018 and 2022 a record-setting volume of bonds will mature, and thus rollover risk may reach an unprecedented level. The study also examines whether the size of the global corporate bond market will continue to grow following a turnaround in the credit cycle and the rise in interest rates. While the overall picture is nuanced by a number of risks, there is considerable room for further growth, but both credit institutions and the creators of regulatory frameworks need to adapt to changing circumstances in order to achieve this. Banks that have so far focused on lending to large corporations can now focus more on SMEs and individuals, while they also need to improve their subscription and credit assessment capabilities, and increase their cost-effectiveness. By way of a recommendation, as it were, the study argues that policymakers and regulators should encourage a shift towards electronic trading platforms, require transparency in corporate reporting and monitor potential systemic risks.

3. Global and regional situation of the corporate bond market

3.1. Situation of the international bond market

After presenting the theoretical background, it is appropriate to examine the extent to which economies of global importance support the statements made in the studies, i.e. what processes can be inferred from the evolution of the international corporate bond market in the past decades. By the end of 2020, the stock of bonds issued globally by non-financial corporations reached a historic record of USD 17 trillion, according to BIS data. This dynamic growth has been ongoing since the global financial crisis of 2008, with a total increase of nearly USD 3.4 trillion in 2019 and 2020. The process was supported substantially by bond purchase programmes, incorporated in leading central banks' set of monetary policy instruments both for market-building purposes and for crisis-management following the Covid-19 crisis.

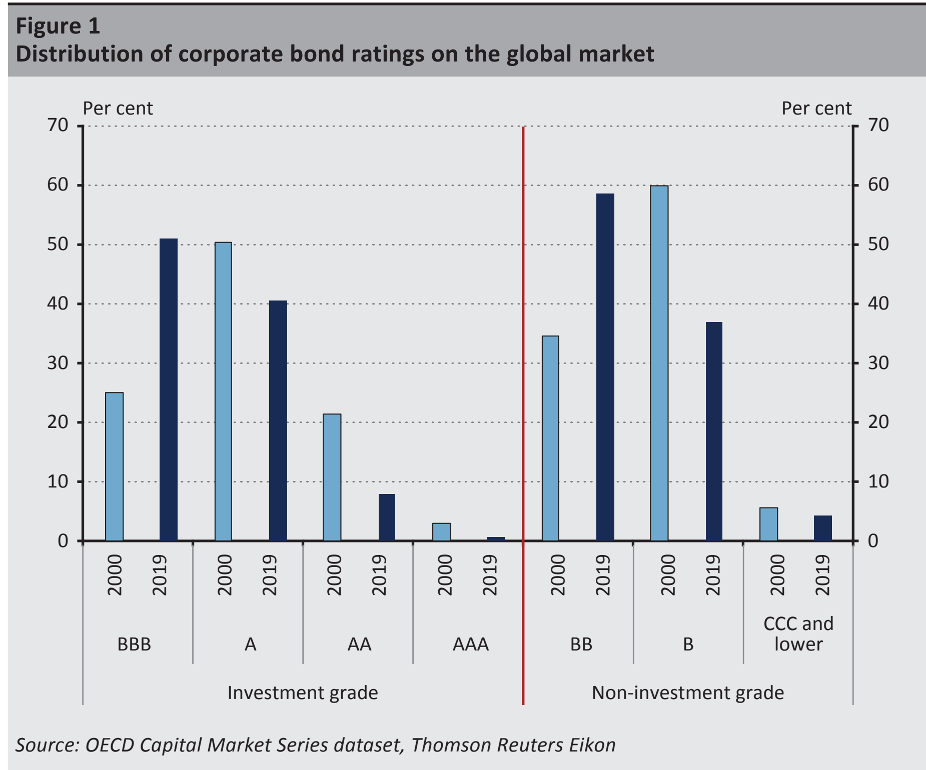
At the same time, a significant stock of debt also poses hazards, as pointed out by *Çelik et al.* (*2020*), with four negative trends identified in the current debt structure: lower average bond quality, higher refinancing risk, longer maturity and weaker investor protection. The changed composition of the stock of debt, particularly the economic downturn due to the coronavirus pandemic, can cause global problems in the corporate sector. On the one hand, one emerging question is the extent to which bankruptcy risks may increase if the current low-yield environment changes, while on the other hand, the increase in the share of emerging markets in the global stock of corporate bonds may lead to a further deterioration in average bond quality. There is naturally a close positive correlation between average credit rating and bankruptcy rates. *Vazza et al.* (*2019*) underline that while no defaults occurred for AAA, AA and A rated bonds between 2009 and 2018, and the bankruptcy rate observed for BBB rated instruments was only 0.06 per cent, while in 2018 0.98 per cent of B rated bonds and 27.2 per cent of CCC/C rated bonds were non-performing.[4] The connection is further reinforced by the fact that in 2018, all defaulting bonds rated by S&P belonged to the speculative non-investment grade, with 87.5 per cent awarded ratings of B– or lower at the beginning of the year.

Viewed in that light, it is particularly striking that while at the beginning of the 2000s the ratio of BBB rated bonds was around 30–35 per cent (within the BBB+ and BBB– bands), by 2019 half of the bonds already had a BBB– rating, representing the lower limit of the category. In line with this trend, the proportion of top-rated AAA bonds fell below 1 per cent, while the proportion of AA rated bonds fell below 8 per cent. Within the non-investment grade, the proportion of the best-rated BB bonds has been rising dynamically since the 2000s, increasing to 60 per cent by the end of 2019 from 30 per cent at the beginning of 2000 (*Figure 1*). This may be explained by the fact that several issuers below BB left the bond market and moved to the leveraged credit market after the financial crisis in 2008. A downgrade wave on the bond market could cause significant problems, because if some bonds were to be reclassified as non-investment grade, many institutional investors might be forced to sell due to their more conservative investment policies. Nevertheless, this behaviour became more moderate during the Covid-19 pandemic, as several central banks defined the target groups of their bond purchase programmes so that the impact of downgrades caused by the pandemic would be taken into account. In line with the growth in lower-rated bonds, stronger investor protection has also become more prominent, a particularly important factor in the low-yield environment. Within the investment grade, the proportion of bonds secured by covenants in the US bond market has been around 15–20 per cent in recent years. By contrast, non-investment grade bonds showed a gradual decline in the ratio of bonds secured by covenants (from 47 per cent to 30 per cent) between 2000 and 2012, but the ratio

[4] In 2018, no BB rated bonds were in default.

increased again in the years following the crisis. At the end of 2019, the indicator stood at 38 per cent, significantly higher than the figure for investment grade. A significant part of these covenants is related to the sale of the company's assets and to further indebtedness (*Çelik et al. 2020*). The increased risk of corporate bonds has increased the importance of the transparent operation of companies and the role of credit ratings that objectively and independently describe the risk of companies.

Figure 1
Distribution of corporate bond ratings on the global market

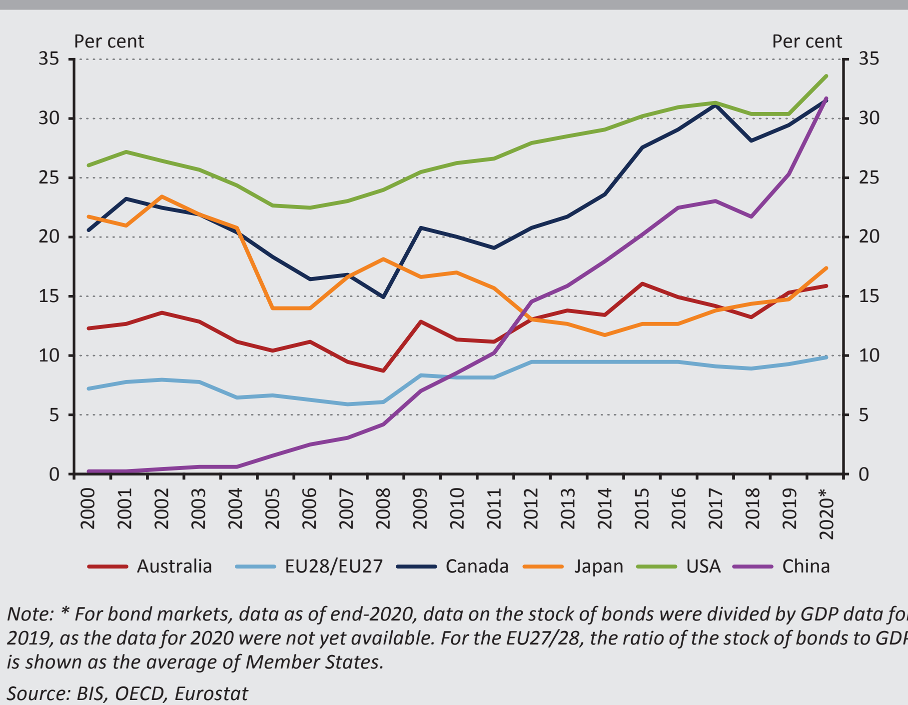


Source: OECD Capital Market Series dataset, Thomson Reuters Eikon

One of the most common indicators for determining the size of the corporate bond market of a country is the ratio of its aggregate stock of bonds to GDP, which provides an efficient means to monitor the extent of changes in the market stock compared to the economy as a whole. The assumption that the aggregate of corporate bonds in proportion to the gross domestic product is increasing at the global level is confirmed by the relevant data of BIS and Eurostat[5] (*Figure 2*).

[5] Source: Bank of International Settlements (BIS) database (https://stats.bis.org/statx/srs/table/c1) and Eurostat database (https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nasq_10_f_bs&lang=en)

Figure 2
Evolution of the stock of corporate bonds in the world's leading economies



*Note: * For bond markets, data as of end-2020, data on the stock of bonds were divided by GDP data for 2019, as the data for 2020 were not yet available. For the EU27/28, the ratio of the stock of bonds to GDP is shown as the average of Member States.*

Source: BIS, OECD, Eurostat

With the exception of Japan, in the five countries with the largest corporate bond markets, and in the EU, during the 7–8 years prior to the crisis the stock of corporate bonds as a percentage of GDP showed a declining trend, which was broken by the 2008 global crisis, after which – although with different dynamics – the stock of non-financial corporate bonds increased in all major bond markets overall. Currently, China is one of the most prominent drivers of the growth in the global stock of corporate bonds. From below 1 per cent in the 2000s, after the 2008 crisis the Asian giant's stock of corporate bonds as a percentage of GDP increased dynamically to over 32 per cent (USD 4.5 trillion) by the end of 2020. This dynamic growth is mainly due to the bond issues of state-owned companies. In addition to China, South Korean, Malaysian and Singaporean companies are also active in the Asian corporate bond market. Although with slower dynamics than in emerging Asian countries, the stock of corporate bonds has also increased in emerging Latin American countries, which is mainly linked to the securities of Brazilian, Mexican and Chilean companies being placed on the market.

Capital market financing has traditionally been a widespread means of corporate funding in Anglo-Saxon countries. The stock of corporate bonds as a percentage of GDP is the largest in the United States, exceeding 34 per cent at the end of 2020, which is approximately 8 percentage points higher than in 2000. The ratio is comparable in Canada, which saw its stock of bonds decrease from 21 per cent in 2000 to 15 per cent during the economic crisis of 2008–2009. Subsequently, however, a significant increase was observed: the ratio of corporate bond debt has been around 30 per cent of GDP since 2015, reaching a historic peak of 32 per cent in 2020. The ratio of corporate bonds to GDP in Australia is considerably lower compared to other Anglo-Saxon countries, without any significant increase in the past 20 years. The figure of 12 per cent in 2000 rose to 16 per cent by the end of 2020, but the financial crisis caused a slight break in the time series in 2008, as in the case of Canada.

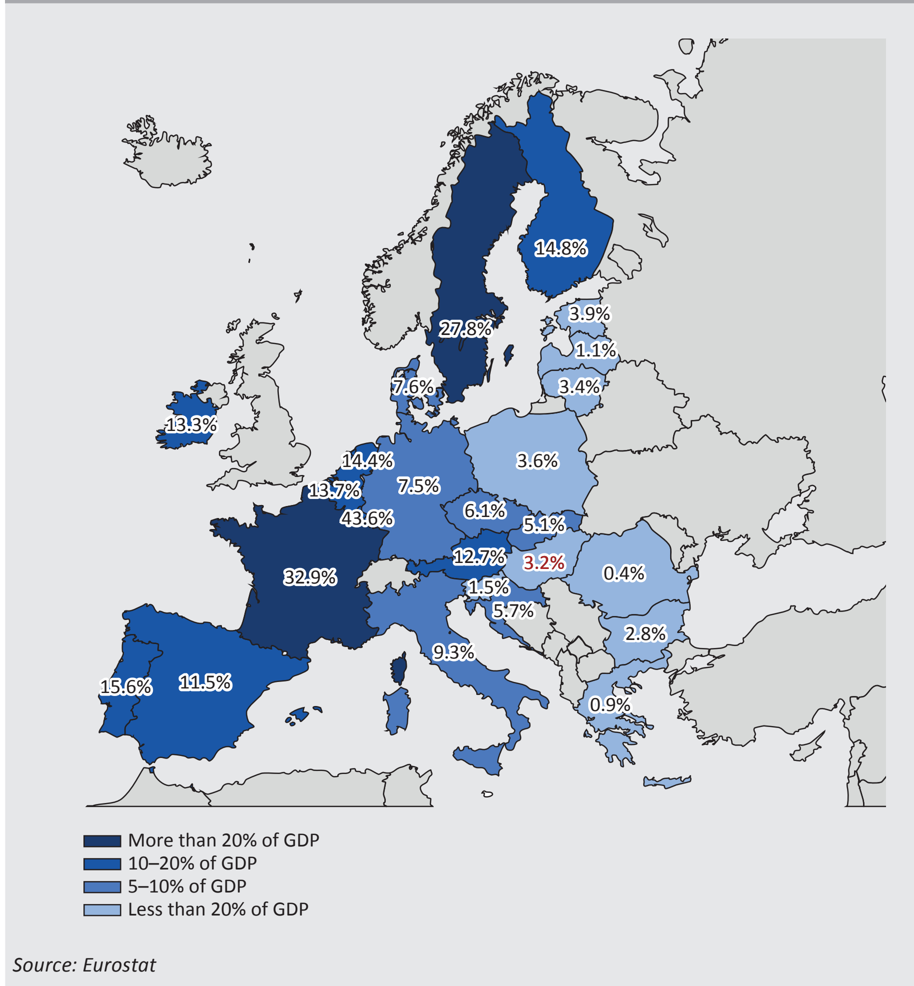
In contrast with the developed countries described above, Japan can be considered an exception, with its ratio of corporate bonds to GDP showing a decreasing trend from 22 per cent in 2000 to 18 per cent at the end of the period under review. The reason for this is that Japanese corporate funding has essentially been dominated by bank lending, although the Japanese corporate sector has again shown somewhat greater reliance on financing from the bond market since the beginning of the pandemic.

For the 28 countries of the European Union, over the 20-year period concerned the stock of corporate bonds as a percentage of GDP increased slightly from 7 per cent to 10 per cent by the end of 2020. This ratio is similar to the Japanese and Australian figures, but falls significantly short of the size of the markets in the USA, Canada and China.

3.2. Situation of the EU bond market

Within the European Union, the development of individual Member States' bond markets varies considerably: while in some countries the stock of bonds amounts to around 30 per cent of GDP, in the Eastern and Central European Member States and the Baltic region it tends to be less than 5 per cent (*Figure 3*). Examining the countries of the European Union, it emerges that there is a positive correlation between the level of economic development and the size of the corporate bond market. In developed countries with higher per capita GDP, corporate indebtedness also tends to be higher, i.e. a more active use of the capital market can be observed. Despite the positive correlation, there are some countries in the EU where the size of the bond market is smaller or larger when measured against the country's development: In Germany and Denmark, the bond market is relatively small at 7–8 per cent of GDP, while the 16-per cent level in Portugal is far above that of countries at a similar level of development.

Figure 3
Stock of non-financial corporate bonds in EU Member States as a percentage of GDP (2020)



Source: Eurostat

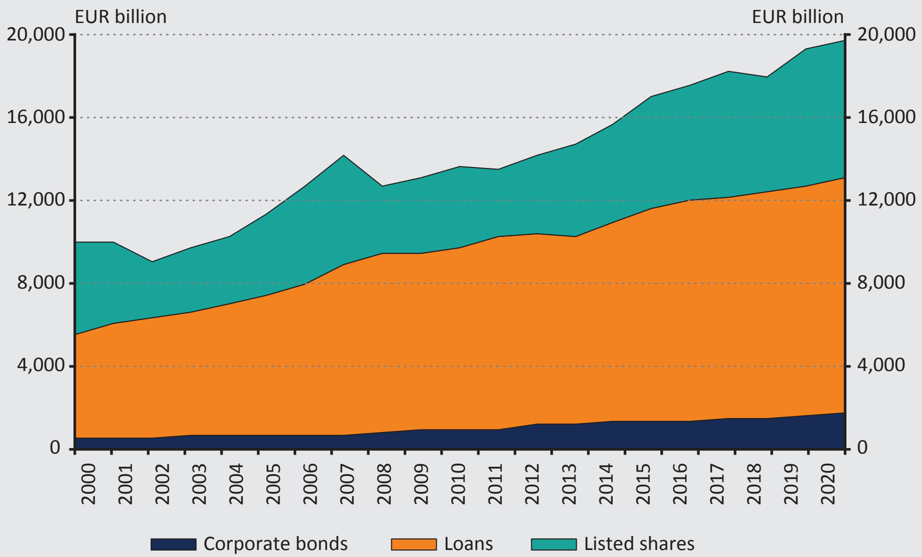
The level of bond market development stands out in two countries: At the end of 2020, the stock of non-financial corporate bonds in France and Sweden approximated 33 per cent and 28 per cent of gross domestic product, respectively.[6] In the French bond market, the activity of partly state-owned enterprises and large multinational corporations tends to be high, while in Sweden regional governments and municipalities represent a larger proportion of issuers than in

[6] The most advanced bond market in the EU is that of Luxembourg, where the stock of corporate bonds was equivalent to 44.6 per cent of GDP at the end of 2020, while in nominal terms the size of the domestic market did not rank at the top among EU Member States.

other markets. The ratio of corporate bonds to GDP is 10 per cent for the EU as a whole and averages 14.9 per cent for euro area countries. Bond markets with levels of development above the EU average are typically found in Western and Scandinavian countries.

In order to examine the growing importance of the corporate bond market, it is worth taking a look at how the liability structure of companies has evolved over time. The structure of liabilities shows the lending opportunities available to the companies: the ratio of creditors to shareholders in financing them, and the importance of relying on capital markets for funding. If we look specifically at the evolution of the markets for bank credit and bonds in euro area countries, over the last two decades it emerges that while the loan portfolio increased dynamically until 2008, the bond market tended to stagnate. During the years of the crisis, lending dropped significantly and remained largely negative in the 5–6 years following the crisis, leading to a contraction in the loan portfolio. By contrast, the euro area bond market grew dynamically from the previous EUR 600–700 billion to approximately EUR 1,700 billion by the end of 2020. It is also striking that while the bond market's role in funding has been growing continuously and steadily since the crisis, the share of equities and loans in corporate finance has been much more volatile. In addition to the change in the stock of corporate bonds, the change in the share of bonds in corporate finance also deserves analysis. According to Eurostat data, while at the end of 2000 the weight of bonds on the liabilities side in the euro area was less than 4.7 per cent, it was already 6.8 per cent in 2010 and approached 8.7 per cent in 2020, with the importance of longer-term, more stable bond financing becoming more and more remarkable. Obviously, loans – especially bank loans – continue to account for the most significant slice of corporate debt, but the complementary role of capital markets, which provide an important alternative to bank loans, is clearly strengthening (*Figure 4*).

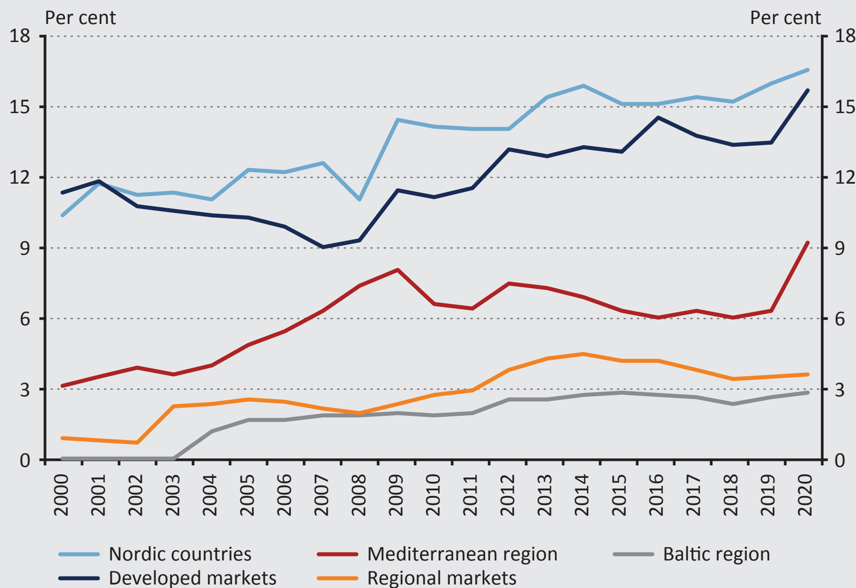
Figure 4
Evolution of the liability structure of non-financial corporations established in the euro area



Source: Eurostat

An analysis of the development of the EU bond market based on the data for the past 20 years leads to a remarkable conclusion. The markets of the countries can be classified into five large groups based on a joint examination of their geographic location and bond market developments. It is clear from the time series data that in almost all country groups, except for the Mediterranean countries, the bond market has become more important in the last decade and that the markets of all EU regions were able to grow in 2020, mainly due to the central bank bond purchase programmes that mitigated the negative effects of the pandemic (*Figure 5*).

Figure 5
Evolution of the size of European regional bond markets as a percentage of GDP



Note: Baltic region: Estonia, Latvia, Lithuania; Nordic countries: Denmark, Finland, Sweden; Mediterranean region: Greece, Italy, Portugal, Spain; Developed markets: Austria, Belgium, France, Germany, Ireland, Netherlands; Regional markets: Bulgaria, Croatia, Czechia, Hungary, Poland, Romania, Slovakia, Slovenia. The size of the regional markets as a percentage of GDP was defined as the arithmetic average of the data for the Member States taken into account.

Source: Eurostat

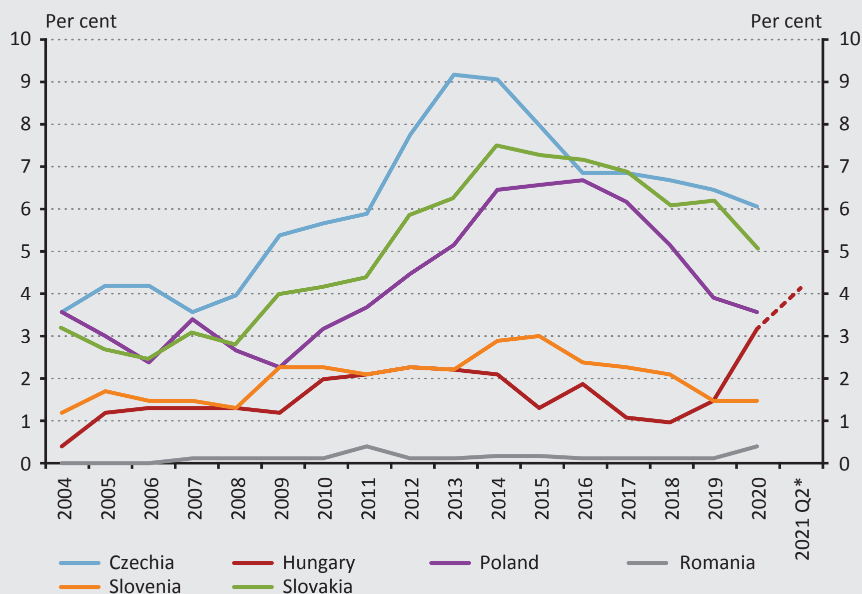
Currently, the most developed region is the market of Scandinavian countries, where the average bond market stock is close to 17 per cent of GDP, and this region's markets have also made the most progress in terms of the extent of development, as the regional ratio of stock to GDP increased by 6.3 percentage points from 2000 to the end of 2020. In the early 2000s, developed markets experienced a decline in the bond market, which lasted until the economic crisis in 2008, and since then, although with minor interruptions, the growth of the stock as a percentage of GDP has been continuous. The Mediterranean markets developed along a path that differed from other regions: while the stock of corporate bonds increased intensively until the global crisis, after the crisis, the volume of bonds declined, mainly due to the collapse of the Greek bond market and contraction of the Portuguese market from 2013 onwards. In the case of the Baltic States and the countries of regional markets, the bond markets took off in the period under review. While the size of the corporate bond markets was below 1 per cent at the beginning of the 2000s, these markets grew to an average of 3.6 per cent by the end of 2020. In response to the economic difficulties caused by the pandemic hitting the continent in early 2020, several central banks in Europe launched targeted corporate bond purchase programmes, which significantly contributed to the ability of the average market of all country groups under review to

grow as a percentage of GDP in 2020, and even to reach the highest reading of the last 20 years in all regions, except for the markets of the Central European region.

3.3. Situation in the CEE region's bond market

For a more detailed examination of the bond markets of the countries in the region, the Romanian and Slovenian markets were also included in the analysis along with those of the V4 countries. Based on the volume of corporate bonds as a percentage of GDP, the Czech, Slovak and Polish bond markets are the most developed, but thanks to the growth of the past two years, the Hungarian bond market has also approached the average of the regional markets (*Figure 6*). The Slovenian market falls slightly short of the average, while the Romanian bond market is underdeveloped, with almost no bond issuance. The countries considered are also referred to by *Iorgova and Ong* (*2008*) as the developing markets of the continent, as the establishment of market mechanisms and capital market regulatory frameworks in these Member States did not begin until the early 1990s. Although the markets in the region have seen significant growth since then, as the bond market analysis by the *European Commission* (*2017*) points out, compared to the core countries the bond market in the region at large is still characterised by a lower degree of development, with the majority of issuers entering the bond market for the first time, and many potential issuers only starting to gain an understanding of raising funds through the bond market.

Figure 6
Development of the CEE region's bond markets as a percentage of GDP



*Note: * The size of the Hungarian bond market as at the end of the second quarter of 2021 was determined on the basis of the central bank's estimates.*

Source: Eurostat, MNB

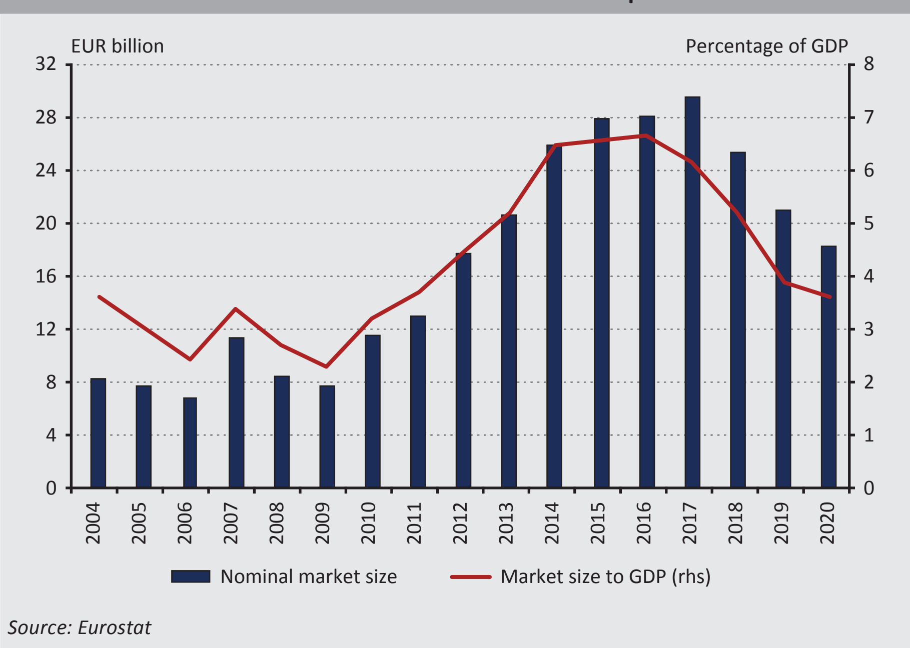
In the years after the 2008 crisis, the role of the bond market in the Czech, Slovak and Polish economies increased significantly, with the stock of bonds as a percentage of GDP more than doubling in these countries. In all three markets, the appetite for bond issues waned in recent years, which may be explained by the favourable interest rates on bank loans available to companies and by the GDP effect. In recent years, the ratio has dropped from its peak of 9.2 per cent to 6.1. per cent in the Czech market, from 7.5 per cent to 5.1 per cent in the Slovak market, and from 6.7 per cent to 3.6 per cent in the Polish market. Such volatility was not observed in the Slovenian and Hungarian markets, and as a result of the crisis the role of the bond market temporarily increased in both countries. However, whereas in Slovenia the ratio of stock to GDP at the end of 2020 was only slightly higher than at the time of the crisis, the Hungarian bond market stood at 3.2 per cent, a historic high, with sustained growth mainly as a result of the MNB's Bond Funding for Growth Scheme. According to our estimates, the Hungarian market was close to 4.2 per cent of GDP at end-June 2021, only 0.3 percentage points below the average of the V4 countries.

3.3.1. The Polish bond market

The stock of bonds issued by Polish companies amounted to EUR 18.3 billion at the end of 2020, equivalent to 3.6 per cent of the country's GDP, meaning that – in nominal terms – Poland has the largest market in the CEE region. The Polish corporate bond market experienced its most intensive growth in the period following the 2008–2009 economic crisis (*Figure 7*), in which the introduction of the Catalyst system in 2009, the first Polish market organised for credit instruments, played a significant role. The Warsaw Stock Exchange (WSE) operates two retail markets and BondSpot operates two wholesale markets in the Catalyst structure. Both the stock exchange and BondSpot have dematerialised financial instruments, such as corporate bonds. On the retail market regulated by the stock exchange, a bond issue must be worth at least EUR 200,000, while on the wholesale market operated by BondSpot, this entry threshold is PLN 5 million (approximately EUR 1.08 million).[7]

[7] Calculated at the exchange rate on 21 September 2021.

Figure 7
Evolution of the stock of bonds of Polish non-financial corporations

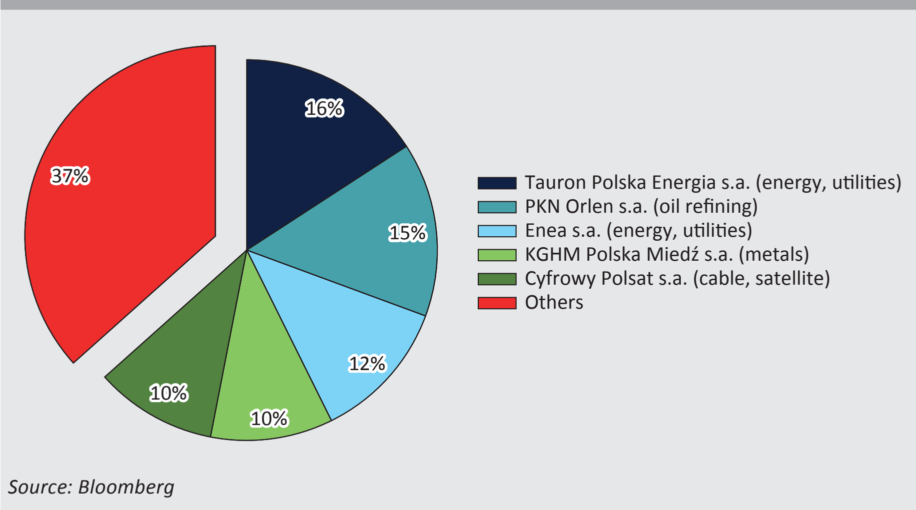


Source: Eurostat

According to Bloomberg's bond database,[8] the stock of active Polish corporate bonds is almost exclusively denominated in PLN, with 75 per cent of the instruments related to principal repayments at floating interest rates, and 54 per cent related to bullet repayments. The average face value on issue (EUR 35 million) and the average maturity (7.1 years) of the series of securities are both considered low by regional standards. The Polish market is characterised by a lower concentration of issuers and sectors compared to the countries in the region. The energy group Tauron Polska s.a., the country's largest corporate bond issuer, accounts for only 15 per cent of the total market, and even the five largest issuers combined cover "only" 63 per cent of the market, with no major differences in their market shares. The bond market portfolio is linked to more than 50 issuers, i.e. a wider range of large corporations take the opportunity to raise funds through the securities market than in other regional Member States. In the sectoral breakdown of the bond market, public utilities and energy occupy a prominent position with a combined share of 38 per cent, whereas 16 per cent of the stock of Polish corporate bonds was linked to telecommunications, and 10 per cent each to oil refining, mining and metal processing (*Figure 8*).

[8] As queried on 1 April 2021.

Figure 8
Market share of the largest issuers in the Polish corporate bond market

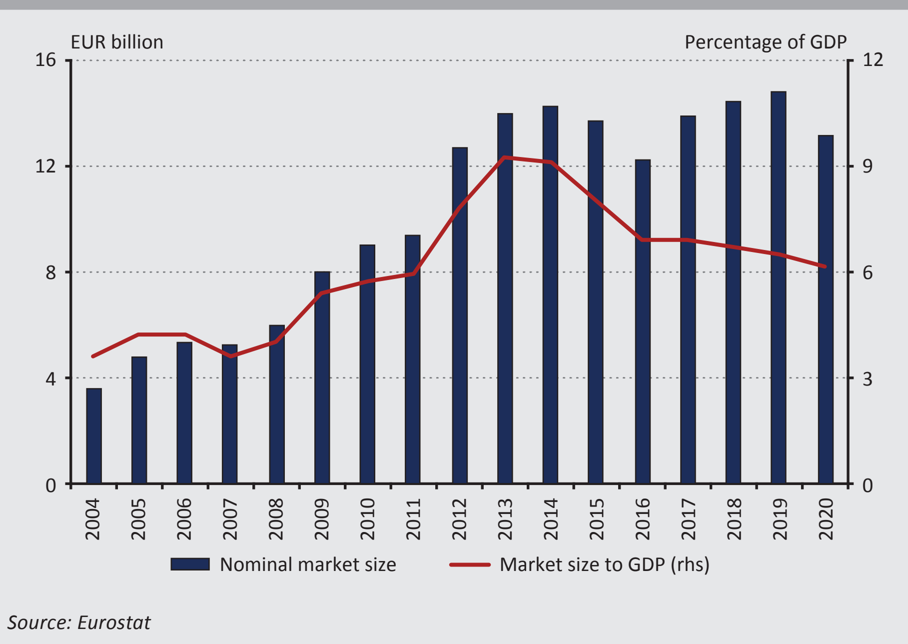


Source: Bloomberg

3.3.2. The Czech bond market

The stock of corporate bonds issued by non-financial corporations established in the Czech Republic exceeded EUR 13 billion at the end of 2020, as a result of which the Czech bond market qualified as the most developed in the region, with a size equivalent to 6.1 per cent of GDP. The stock of corporate bonds started to grow significantly after the global economic crisis of 2008–2009, reaching its peak by the end of 2013 (9.2 per cent of GDP), while in nominal terms it was the largest in 2019 (EUR 14.8 billion). Despite the nominal growth in the stock of bonds, expressed as a percentage of gross domestic product it has been steadily declining since its peak in 2013 due to the strong GDP effect. In 2020, the bond market contracted, but the stock of EUR 13.1 billion at the end of the year was still 3.5 times the market size at the end of 2004 (*Figure 9*). Arguably, only a narrow circle of large companies exploit the opportunity to raise funds via bond issues. The Czech Ministry of Finance attributes this phenomenon to information barriers, to the lack of financial knowledge characteristic of the SME sector, and to bank loans that are well targeted to the segment and available on favourable terms (*Ministry of Finance of the Czech Republic 2018*).

Figure 9
Evolution of the stock of bonds of Czech non-financial corporations

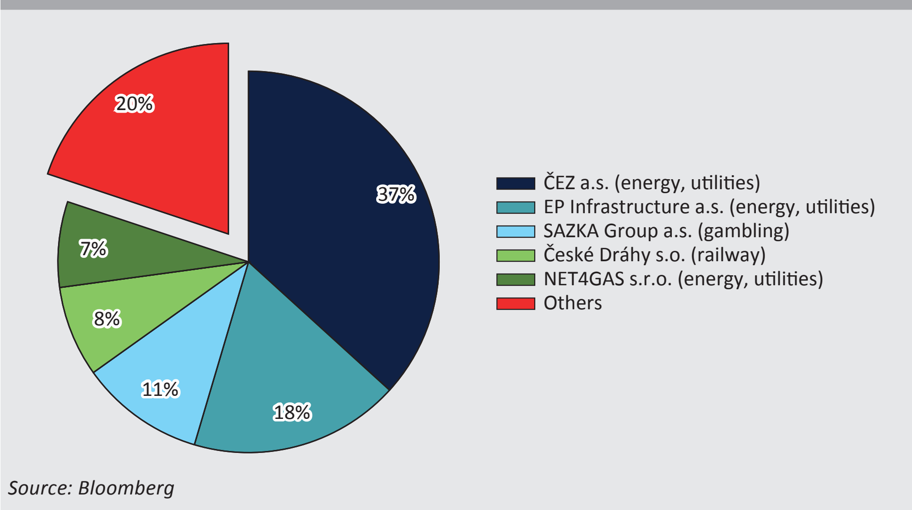


Source: Eurostat

According to Bloomberg's data, the Czech corporate bond market is dominated by fixed-rate bonds denominated in foreign currency, which have a longer maturity than the average of the regional markets, and a higher average face value on issue. 74 per cent of the market bond portfolio is denominated in EUR and only 18 per cent is traded in CZK. In terms of the type of interest, fixed-income securities account for 90 per cent of the stock, and in terms of the type of principal repayment, bullet securities account for 46 per cent. The average maturity of Czech corporate bonds at the time of issue is 9.6 years, which significantly exceeds the same indicator for securities in the Polish market. The average face value of Czech corporate bonds on issue is EUR 178 million, five times the average issue size in the Polish market.

The market of non-financial corporations established in the Czech Republic is characterised by an extremely strong concentration of issuers and sectors (*Figure 10*): the energy company ČEZ a.s., with a dominant state shareholding, had a 37-per cent market share through 18 bond series. The 5 largest issuers account for four-fifths of the bond market. The sectoral distribution of issues shows that sectors with significant investment needs are active in the bond market. The market share of energy production and utilities is close to 70 per cent of the total stock, while the gambling segment – through the bonds of a single issuer – accounts for an 11-per cent share. The Czech corporate bond market was composed of securities issued by 38 issuers at the time of the analysis.

Figure 10
Market share of the largest issuers in the Czech corporate bond market



Source: Bloomberg

4. Corporate asset purchase programmes of central banks

In the evolution of the corporate bond market and the economic recovery following the crisis caused by the coronavirus, specific central bank asset purchase programmes have played a significant role, aiming to improve the conditions for corporate funding opportunities in response to the structural problems already identified by professionals. Asset purchase programmes offer opportunities to improve bond market liquidity and reduce yield spreads, but their main objective is to improve the efficiency of the monetary policy transmission channel. The latter is particularly important for central banks where inflation targeting monetary regimes are applied. In relation to crisis management, many central banks have enhanced their monetary policy toolkits and many have turned to the corporate bond market to purchase bonds on primary and secondary markets. In light of the recent period, it can be said that central banks responded quickly to the economic crisis caused by the Covid-19 pandemic, and that in turn may significantly increase the efficiency of economic recovery.

4.1. Corporate bond purchase programme of the European Central Bank

On 10 March 2016, as part of its asset purchase programme (APP), the European Central Bank (ECB) announced its *Corporate Sector Purchase Programme* (CSPP), designed to further ease monetary policy and improve financing conditions for euro area companies. Under the programme, the ECB purchases investment-grade, EUR-denominated securities of euro area non-financial corporations on both the primary

and secondary markets, with remaining maturities ranging from 6 months to 30 years. The asset purchase programme was temporarily halted by the ECB in 2018, but based on market developments the Board of Governors considered it necessary to restart net purchases from 1 November 2019. In addition, the ECB purchases corporate bonds not only within the traditional Asset Purchase Programme (APP), but also as part of the Pandemic Emergency Purchase Programme (PEPP) announced in March 2020, thus providing a quick and targeted response to the economic downturn caused by Covid-19.

In their analysis of the effects of the CSPP programme, *De Santis and Zaghini* (*2019*) examined 12,000 bonds issued between October 2013 and June 2018. They found that the bond purchase programme contributed significantly to the expansion of the corporate bond market in the two years following the announcement on 10 March 2016. The issues examined were divided into two groups: those meeting the requirements of the purchasing programme and those failing to meet them, with the latter serving as the control group in the research. The authors concluded that the probability of issuing bonds in EUR was 14 per cent higher in the group where the issues met the requirements of the programme than in the other group. The result holds true even if the control group only includes non-bank or non-investment grade issuers.

It should also be pointed out that in some cases the adjustment of market participants was already triggered by verbal intervention, a good example of which is that the interest rate spreads in relation to the (benchmark) government bond yield started to decrease in March 2016 after the announcement of the European Central Bank's bond purchase programme. The corporate bond market saw a drop of 25 basis points for non-investment grade bonds, nearly 20 basis points for bonds issued by non-financial corporations and 5 basis points for corporate bonds issued by financial institutions (*ECB 2016*).

4.2. Effect of the Bank of England's bond issuance programme

Following completion of the Brexit referendum, the Bank of England launched its GBP 10 billion corporate bond issue programme in August 2016[9] for the purpose of economic stimulus, as part of which it purchased GBP-denominated bonds issued by investment-grade non-financial corporations. The programme was designed to reduce the bond market yield spread by increasing investment activity, which makes bond financing more attractive and encourages companies to issue bonds. In addition to the increase in the number of bonds denominated in GBP, as with the ECB's programme, following the announcement a significant decrease was observed

[9] In April 2020, the Bank of England decided to increase the envelope of the bond issue programme by GBP 10 billion, creating a new envelope of GBP 20 billion. https://www.bankofengland.co.uk/markets/market-notices/2020/asset-purchase-facility-additional-corporate-bond-purchases. Downloaded: 19 June 2020.

in bond spreads over government securities. *Boneva et al.* (*2018*) examined the effect of the bond issue programme on the bond market yield spread. Compared to risk-free sovereign debt, the spreads of GBP-denominated corporate bonds decreased by 13 to 14 basis points compared to the USD- and EUR-denominated bonds of the same companies; nevertheless, the yields on GBP bonds that did not meet the conditions of the bond purchase programme but were still rated as investment grade also decreased, indicating that the latter also benefited from the positive effects of the central bank programme.

In May 2021, the Monetary Board of the *Bank of England* (*2021*) invited the management of the institution to examine how it could support the climate-neutral transformation of the UK economy alongside its primary objective of price stability. As part of these efforts, the central bank announced the greening of its corporate bond portfolio by publishing a discussion paper on the principles and instruments enhancing the relevance of sustainability bonds.

4.3. Recent launches of additional corporate bond purchase programmes

In May 2020, in order to overcome the economic crisis caused by Covid-19 and to increase market liquidity, the Fed launched its bond purchase programme, mainly through special purpose vehicles (SPVs) established by the US Treasury, which provided loans for the purchase of investment-grade corporate bonds and bond ETFs, as a result of which the bonds purchased were not entered on the Fed's balance sheet. Due to the announcement of the programme, corporate bond spreads started to decline, although they remain above the pre-Covid-19 level.[10] Another positive aspect is that the value of investment-grade bonds issued between 17 March and 19 May 2020 amounted to USD 675 billion, which exceeded the amount issued in the first half of 2019 by USD 100 billion. In terms of debt purpose, the vast majority of revenues from issues were used for general liquidity purposes and refinancing (*S&P Global 2020*). The trend continued later in the year: according to Moody's report, in 2020 (already in September), the issuance of both investment grade and speculative corporate bonds broke the records of previous years (*Lonski et al. 2020*).

In May 2020, the Bank of Canada, like the Fed, launched its 12-month corporate bond purchase programme, as part of which it purchases bonds denominated in CAD and rated at least BBB on the secondary market up to a limit of CAD 10 billion. The primary objective of the programme is to provide companies affected by the

[10] Source: https://www.advisorperspectives.com/commentaries/2020/05/26/the-feds-corporate-bond-buying-programs-faqs. Downloaded: 15 January 2021.

virus with the long-term financing necessary for their operation by boosting the liquidity of the corporate bond market.[11]

Among the Nordic countries, consideration has so far been given to the purchase of corporate bonds, similarly to the ECB's purchases, by the Swedish central bank Riksbank. According to January 2020 data, of the 290 corporate bonds on the Swedish market,[12] less than one-third (79) had ratings awarded to them (*Lindeberg 2020*). Finally, as part of its set of actions responding to the Covid-19 pandemic, Riksbank launched its bond purchase programme in September 2020, within the framework of which it purchases bonds with residual maturities of up to 5 years from investment-grade companies established in Sweden. Since January 2021, using the so-called *negative screening* method,[13] the Swedish central bank has only been purchasing corporate bonds placed on the market in accordance with international sustainability standards.

5. Situation of the Hungarian corporate bond market and the Bond Funding for Growth Scheme

5.1. Liabilities of Hungarian non-financial corporations before 2019

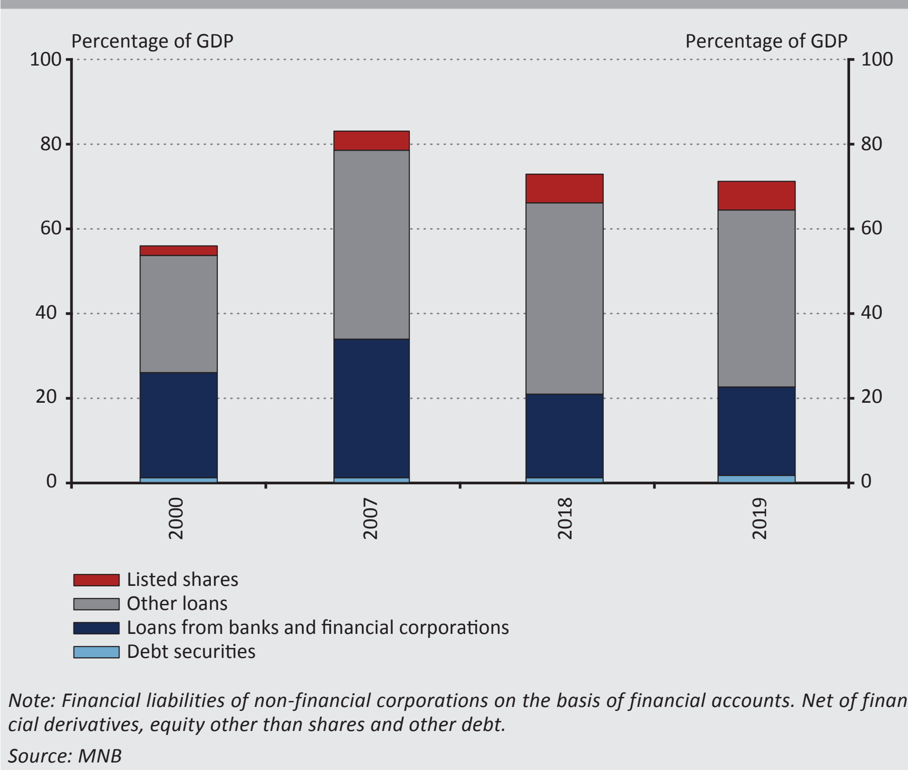
Within the liabilities of Hungarian non-financial corporations, the stock of bonds is negligible (*Figure 11*). Over the past 20 years, equity holdings have been predominant among Hungarian companies, reaching the equivalent of around 100 to 150 per cent of GDP, accompanied by a significant stock of shareholder loans from foreign parent companies. At the same time, bank loans are a realistic option for the majority of Hungarian companies when raising external funds, apart from the fact that such loans amounted to only around 20 per cent of GDP, which is lower than the overall rate measured for EU countries. Before the launch of the Bond Funding for Growth Scheme, bond funding was a viable alternative only for a small number of companies, and its volume was around a mere 1 per cent of GDP.

[11] Corporate bond purchase programme (CBPP) – Term Sheet. https://www.bankofcanada.ca/markets/market-operations-liquidity-provision/market-operations-programs-and-facilities/corporate-bond-purchase-program/corporate-bond-purchase-program-cbpp-term-sheet/. Downloaded: 18 January 2021.

[12] The data includes both financial and non-financial corporate bonds.

[13] Rather than the existence of a green rating, the scope of bonds meeting the sustainability criteria can be narrowed on the basis of specific restrictive norms and constraints defined for sectors and activities.

Figure 11
Liabilities of Hungarian non-financial corporations as a percentage of GDP



Note: Financial liabilities of non-financial corporations on the basis of financial accounts. Net of financial derivatives, equity other than shares and other debt.

Source: MNB

5.2. Launching the Bond Funding for Growth Scheme

Spillover of the 2008 global economic and financial crisis to Hungary also led to significant disruptions in the debt-based financing of the Hungarian corporate sector. The structure of corporate finance was characterised by three unfavourable trends. The first was that the channel of bank credit contracted to a greater extent than the international trend, as a result of which the volume of loans to companies, especially SMEs, started to decline. Second, the structure of corporate loans did not show healthy characteristics, in terms of the length of maturity periods and the type of interest. Third, the diversification of funding for Hungarian companies, which traditionally relied on bank lending, was at a low level not only compared to the average of the European Union, but also to that of countries in the Central and Eastern European region. In order to enhance corporate financing opportunities, the MNB responded with monetary policy instruments targeted at improving the above trends.

In June 2013, the central bank first launched its Funding for Growth Scheme with a focus on improving the channel of bank credit, designed to put Hungary's corporate loan portfolio back on a growth path after its fall to three-quarters of its pre-crisis level by 2013. Considering the limited access of the Hungarian SME sector to longer-term and fixed-rate loans, the MNB contributed to the increase in the share of fixed-rate loans with the Funding for Growth Scheme Fix facility launched in early 2019, which rendered the structure of the corporate loan portfolio more uniform. Despite that, the diversification of corporate funding was still not achieved, because while in 2019 the bank loan portfolio was equivalent to 20 per cent of GDP, the Hungarian corporate bond market was worth around a mere 1 per cent of gross domestic product. To provide for a more balanced footing of corporate funding in Hungary, in July 2019 the MNB launched its Bond Funding for Growth Scheme (BFGS), designed to boost the liquidity of the Hungarian corporate bond market in order to expand domestic corporate financing opportunities (*MNB 2019*).

The Bond Funding for Growth Scheme seeks to improve the efficiency of monetary transmission by stimulating bond market liquidity. The BFGS framework draws on the ECB's corporate bond purchase programme (CSPP) in respect of several points. Under the BFGS, the central bank purchases corporate bonds on both the primary and secondary markets, subject to specific conditions for the issuer and its bonds. In the period since the launch of the bond programme, in response to changes in the macroeconomic situation, in particular those resulting from the pandemic, the Monetary Council of the MNB has fine-tuned the original parameters of the BFGS on several occasions. Within the meaning of those changes, issuers may currently include non-financial companies and public undertakings established in Hungary, with a balance sheet total of at least HUF 1 billion according to the financial statements for the two most recent financial years. To be issued under the bond scheme, a security must have a rating of at least B+ by a credit rating agency recognised by the European Securities and Markets Authority (ESMA), the total nominal value of the issue must be at least HUF 1 billion, and the tenor must be between 3 and 30 years. In order to make the allocation of funds more efficient, the MNB also requires that the issuer introduce the bonds issued as part of BFGS to a trading platform of the Budapest Stock Exchange (BSE) within 90 days of the date of the issue. The MNB employs the Preferential deposit facility to neutralise the excess liquidity generated in the banking system as a result of the asset purchases.

5.3. Issues under the Bond Funding for Growth Scheme

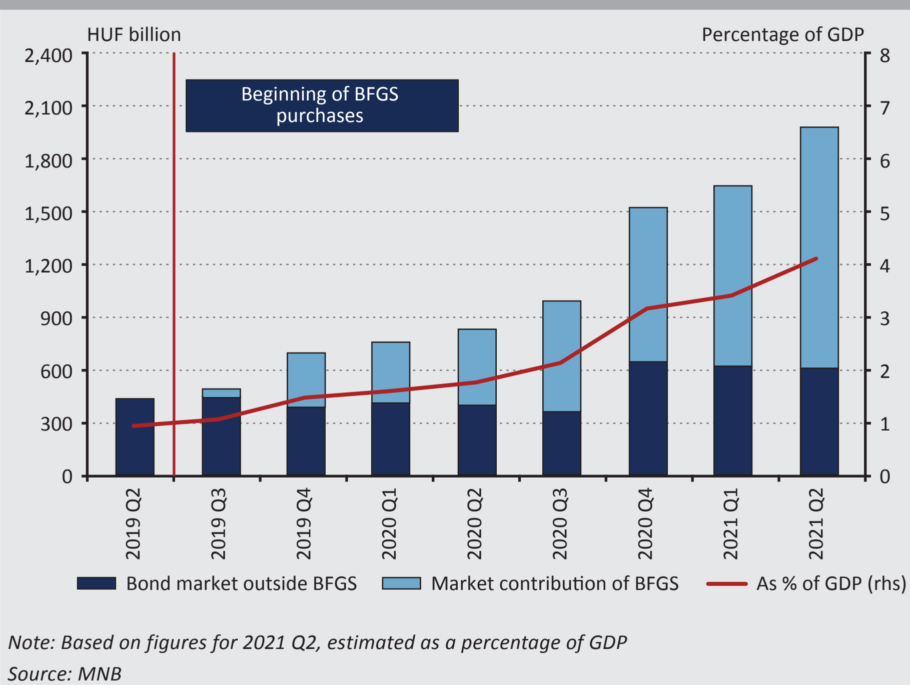
In the framework of the bond programme, 80 bond series of 63 companies were successfully placed on the market by the end of August 2021, and with these transactions issuers raised HUF 1,550 billion worth of funds, while the MNB effected bond purchases with an estimated face value of nearly HUF 905 billion. The MNB's purchases are not subject to any sectoral preferences, so the sectoral breakdown

of issuers also shows a diversified picture; that said, there is a significant share of companies in the manufacturing industry and those with operations related to the property market. The bonds have an average maturity period of 9.3 years and an average credit rating of BB. The average yield calculated for the 80 issues is 2.49 per cent, and the spread of the auctions over the average yield of government securities is only 27 basis points, which shows that participants in the BFGS accessed funds at favourable costs. The companies participating in the BFGS used the funds raised primarily for investments and acquisitions that increased their competitiveness, and to a smaller degree to refinance earlier loans with less favourable terms.

Before launch of the BFGS, the bond market for Hungarian non-financial corporations was only around 1 per cent of GDP in size and was restricted to bonds issued by a limited group of companies, typically in foreign currency. Thanks to the significant contribution of the BFGS issues, we estimate that at the end of the second quarter of 2021 the stock of corporate bonds may have reached 4.2 per cent of gross domestic product, and the nominal market size has almost quintupled since the launch of the bond programme (*Figure 12*). According to the MNB's data, between June 2019 and July 2021 the number of corporate bond issuers and the number of bond series placed on the market more than doubled, the share of HUF-denominated securities increased from below 10 per cent to 60 per cent of the total portfolio, and the sectoral and issuer concentration of the bond market decreased significantly. Since the launch of the BFGS, the Hungarian bond market has not only kept up with the average size of the markets of countries in the region, the structure of the market has also become significantly healthier and more diversified. As an important milestone for the Hungarian capital market, the first Hungarian green corporate bond was issued in August 2020 as part of the BFGS, which has since been followed by another 10 series of bonds meeting the sustainability criteria.

Thanks to the BFGS, the number of corporate bond series admitted to trading on a trading venue has increased significantly. While at the end of 2019 there were only 8 corporate bonds on the BSE, at the end of July 2021 there were 69, i.e. the number of instruments present on the stock exchange platforms has increased almost ninefold since the launch of the programme. The obligation of listing helps to increase market transparency and protect investors, and the bond issue process and participation in listing also strengthen Hungarian companies' knowledge base of the financial and capital market.

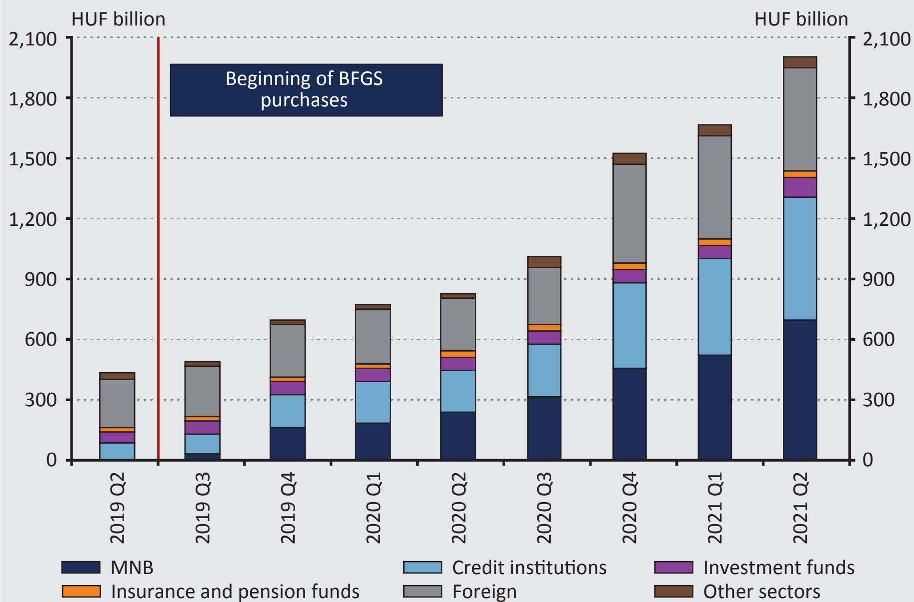
Figure 12
Stock of bonds of non-financial corporations established in Hungary



Note: Based on figures for 2021 Q2, estimated as a percentage of GDP
Source: MNB

The ownership distribution of the overall Hungarian corporate bond market shows a varied picture; however, thanks to the BFGS, the ratios related to the shareholder groups have changed significantly, with the central bank and credit institutions currently representing the largest investors (*Figure 13*). According to the latest statistical data (from June 2021) on securities, 35 per cent of the bond market of more than HUF 2,000 billion was held by the MNB, 31 per cent by credit institutions and 7 per cent could be found on the balance sheet of institutional investors. The aggregate of securities held by foreign residents represented a quarter of the market. The launch of the BFGS triggered a considerable fall in the proportion of foreign residents.

Figure 13
Evolution of the distribution of holders of bonds issued by non-financial corporations after the launch of the BFGS



Source: MNB

6. Summary and conclusions

The important role of a developed corporate bond market in the economy is confirmed by a number of studies. As an alternative form of financing, corporate bonds contribute to the provision of market liquidity, reinforce the diversification of corporate sector funding in terms of the availability of funds and promote more favourable funding costs while ensuring greater transparency about issuers, thereby improving the overall efficiency the allocation of funds in the market.

Compared to the early 2000s, growth has been observed in the stock of corporate bonds in both developed and developing markets. This is due, on the one hand, to the fact that as bank lending dried up during the crisis, the need and importance of alternative funding options were recognised by companies, and, on the other hand, central banks started to encourage the issue of corporate bonds through their bond purchase programmes, which facilitated the development of wider and deeper markets. The central bank asset purchase programmes designed to stabilise the corporate bond market have been given a new impetus to mitigate the Covid-19 crisis, which contributes to dampening the economic downturn and to a faster recovery. The sharp increase in issues in the US market proves that a central bank

can play a significant role by providing stimulus in the securities market, while mitigating the turbulence caused by a sudden surge in yields. The Bond Funding for Growth Scheme launched by the MNB was also designed for the development of the corporate bond market, taking into account earlier central bank initiatives.

The findings of the study support the conclusion that monetary policy measures to promote corporate bonds can appear in essentially two ways: one is when the central bank gradually increases market liquidity in pursuit of a long-term strategy for market development. In the other case, in a well-functioning market, the central bank replaces the liquidity which has temporarily dried up as a result of a shock, so that recovery can take place with the least possible economic damage. Using the methods presented, central banks can play a key role in the management of a crisis by creating a more efficient market and a more resilient economy through the diversification of funding forms.

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