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The Operational Activities of EU Banking Groups and the Portfolio of Government Bonds during the COVID-19 Pandemic – the Case of Non-euro Area EU Countries

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Abstract

The objective of this article is to present the results of an analysis of how the form of activities of EU banking groups affected their decisions to purchase non-euro area EU government bonds during the COVID-19 pandemic. The dataset consists of the portfolios of government bonds (including both on- and off-balance sheet items) issued by non-euro area EU countries held by 93 EU banking groups (data aggregated at the highest group level). For each country surveyed, we analysed the structure of banks purchasing the bonds issued by that country and its evolution between 2019 and 2022, with purchasers broken down into domestic banks and EU banking groups operating in the relevant market through subsidiaries or branches. The analysis shows that, during the COVID-19 pandemic, the decisions to purchase the government bonds of non-euro area EU countries were primarily determined by the operational activities of these groups in the local markets. However, significant similarities were observed within the three country groups identified. The added value of the analysis is that it provides insights into the resilience of these banking groups against the 'moral suasion' exerted by non-euro area EU countries to purchase their government bonds. Notably, domestic banking groups exhibited the least resistance to this moral suasion, as evidenced by their increasing share of a specific issuer's government bonds within the portfolio held by all EU banking groups across nearly all surveyed countries.

Keywords: EU banking groups, government bonds, moral suasion, non-euro area EU countries

JEL: E58, G01, G21, G28

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Introduction

The rapid growth of banks' balance sheet exposures to domestic sovereign debt during the 2008 crisis in euro-area countries prompted both scholars and policymakers to speculate that this trend was partly driven by a phenomenon known as 'moral suasion'. This refers to informal pressure exerted by public authorities on banks to provide substantial support to the government by purchasing government bonds. While there has been considerable speculation about the prevalence of this mechanism, it was only the findings of Ongena, Popov, and Van Horen (2019, p. 346) that unequivocally confirmed its use. Their findings indicated that in euro-area countries particularly affected by the public finance crisis, domestic banks increased their exposure to domestic government bonds markedly more often than foreign banks. This effect was stronger for state-owned banks and for banks with an initially low exposure to such bonds.

To prevent governments from coercing banks into increasing their holdings of domestic government bonds beyond what was necessary for portfolio diversification, it would have been essential to strengthen banking union mechanisms and abandon the application of a 0% risk weight to European Union government bonds in capital adequacy calculations (Koleśnik 2019, p. 95). However, this did not happen, and with the outbreak of another crisis, this time sparked by the COVID-19 pandemic, the lack of mechanisms to effectively prevent the use of moral suasion became apparent.

To ascertain whether banks still yielded to moral suasion and which of them increased their government bond exposures even during the crisis, it is pertinent to narrow the scope of the study to only European Union (EU) countries that were not part of the euro area during the COVID-19 pandemic. This is primarily because the governments of these countries were unable to meet their pandemic-related needs by issuing bonds that would then be purchased by national central banks in virtually unlimited quantities under quantitative easing programmes. This is because, in contrast to euro area countries, which could rely on this type of support from the European Central Bank, non-euro area countries central banks launched quantitative easing programmes to a limited extent (e.g. Poland) or did not launch them at all (e.g. Denmark). For this reason, commercial banks purchasing such bonds had to face the fact that, should the crisis worsen, they would find it difficult to sell these bonds before their maturity.

To understand the factors that influenced the change in EU banking groups' exposure to government bonds of non-euro area countries, it is important to recognise the role of moral suasion. Susceptibility to moral suasion depends on the possibility of state interference in the bank's operations, which depends primarily on the bank's domicile. However, under the single banking licence regime, a bank registered in any EU country can operate in another through a branch or on a cross-border basis. These two forms of operation should be contrasted with having a subsidiary in another member state, and all three situations should be compared with the behaviour of local banking groups, if applicable.

This understanding shapes our research objective: to assess how the operational forms of EU banking groups influenced their decisions to purchase non-euro area EU government bonds during the COVID-19 pandemic. Furthermore, this study aims to evaluate the resilience of EU banking groups against moral suasion from non-euro area EU countries to purchase their government bonds.

Literature review

To confirm the existence of a research gap on the impact of the operational forms of EU banking groups on their decisions to purchase non-euro area EU government bonds during the COVID-19 pandemic, a literature review was conducted. This review encompassed three key areas: (1) the moral suasion exerted on EU banks during financial market disturbances, (2) banks' policies based on the form of exposure in the host country, and (3) the impact of the COVID-19 pandemic on banking operations.

The existing literature on the subject addresses moral suasion as a phenomenon where the authorities in financially distressed countries persuade local banks to continue financing domestic public debt. Ongena, Popov and Van Horen (2019, p. 346) identified two mechanisms underlying this phenomenon. First, moral suasion may arise as a natural reaction to the relationship between banks and the government; if banks are linked to or directly controlled by the government, they might be ready to respond to the government's needs. Secondly, moral suasion may be a natural reaction of relatively weak banks that either have a strong incentive to prevent excessive rises in government bond spreads, thereby keeping their financing costs under control, or anticipate needing government assistance in the near future.

However, other authors have pointed out that the increase in banks' interest in home country government bonds is not necessarily the result of moral suasion but the rational behaviour of such banks. They attributed a lower level of risk to home country bonds than to government bonds of other countries during the crisis. On the other hand, the scale of these purchases was also substantially driven by the large amount of liquidity provided by central banks (Pietrovito and Pozzolo 2023, p. 666). The use of moral suasion was further supported by the preferential treatment of government bonds in bank capital adequacy regulations in the EU (Bonner 2016, p. 1195). From the banks' perspective, purchasing EU government bonds was the easiest way to comply with increasing solvency requirements while maintaining good relations with governments that wanted to secure financing. However, a side effect was a reduction in lending to the real economy and a tightening of the interdependence of state budget situations and the stability of the banking system (Buch, Koetter, and Ohls 2016, pp. 1–15).

So far, research on moral suasion in the EU has focused on euro-area countries, particularly peripheral countries such as Greece, Italy, Ireland, Portugal, and Spain (Acharya and Steffen 2015, p. 215) or selected non-euro area countries (e.g. Denmark) (Eisl et al. 2022, p. 21). Studies on Central and Eastern European countries have mainly looked at the correlation between their government bond yields and those of euro-area countries (Stoupos and Kiohos 2022, p. 1).

Analyses of distortions in the EU banking sector during market disturbances have mainly focused on the behaviour of euro-area banks in the context of convergence of domestic interest rates and margins (Kleimeier and Sander 2022, pp. 1–3). While some studies have referred to the impact of economic and political uncertainty on CDS spreads of government bonds (Pan et al. 2024, pp. 143–145), they do not explain why an increase in economic and political uncertainty, which results in an increase in CDS spreads of government bonds, leads to an increase in interest in government bonds for some banks while causing a decrease in interest in others.

Additionally, recent research on the impact of the COVID-19 pandemic on sovereign default risk failed to explain why, despite the increase in this risk for many countries, some EU banking groups still increased their exposure to the government bonds of such countries (Augustin et al. 2022, p. 1251). Other analyses have focused on the impact of the sovereign risk premium on bank profitability among euro-area banks between 2005 and 2019. However, the conclusions mainly addressed the impact of low and negative interest rates on the net interest margin of euro-area banks (Junttila and Nguyen 2022, pp. 1–2).

To date, research has highlighted contagion as a primary risk, although mainly within the euro area. Most analyses have sought to determine the extent of the transmission of sovereign-to-bank risk in euro-area countries by observing how an increase in the risk of government bonds in one euro-area country affects the risk in banks in other euro-area countries. The results of these studies, which were based on an analysis of Italian government bonds, showed that an increase in the credit risk of the issuing country induced an increase in the credit risk of other countries, constituting one of the channels for the spread of contagion in euro area countries (Capasso et al. 2023, pp. 1–2). The effects of the European Central Bank's purchase of government bonds of euro-area countries have been analysed in a range of studies, indicating that it resulted in yields on government bonds of euro-area countries falling in a fairly uniform manner and even in lower yields on government bonds of non-euro area EU countries, notably Denmark and Sweden (Gnewuch 2022, p. 1).

Banks' policies during market disturbances, which depend on the form of exposure in the host country, have been the subject of several studies. However, they focused either solely on euro-area countries or on individual non-euro area EU countries (Koleśnik 2023, pp. 157–159). Additionally, they only distinguished the form of exposure between domestic banks and foreign banks (understood as both subsidiaries of non-EU banks and subsidiaries and branches of EU banking groups). The findings indicate that in some EU countries, domestic banks reduced lending more significantly than foreign banks and raised lending rates (Bofondi, Carpinelli, and Sette 2018, p. 696). This trend was mainly due to foreign banks' lower exposure to local government bonds and their access to financing through the home country's interbank market. However, these studies fail to address how EU banking groups behave based on their forms of exposure in a specific member state.

Some elements of analysis of the impact of a bank's business model in the relevant market and its government bond portfolio structure can only be found in the research by Baziki et al. However, their study did not provide any evidence that a larger portfolio of government bonds in the bank's home country increases its ex-post risk (Baziki, Nieto and Turk-Ariss 2023, pp. 1–2). Additionally, it only looked at the period before the COVID-19 pandemic. It did not explain when local banks increased their exposure to home country government bonds or which factors determined the purchase of these bonds by banks from other countries.

The above review confirms a significant research gap. Despite numerous studies addressing sub-issues such as (1) the moral suasion on banks in EU countries during financial market disturbances, (2) the influence of exposure forms on banking policies in host countries, and (3) the pandemic's impact on banking operations, there is no comprehensive analysis that combines all these themes in relation to the COVID-19 pandemic and EU banking groups operating in non-euro area countries.

Data and methods

We will assess the role of EU banking groups' business activities in their decisions to purchase non-euro area EU government bonds during the COVID-19 pandemic. We will do this by analysing data published by the largest EU banking groups that participate in the European Banking Authority's (EBA) periodic EU-wide transparency exercise. This data source was chosen not only because of its reliability but, above all, because it is aggregated at the highest level of the banking group. This aggregation allows for a comprehensive view of the entire portfolio of government bonds issued by a specific country, irrespective of which entity within the group currently holds them.

The time frame spans from 2019 to 2022, with 2019 serving as a reference point before the COVID-19 pandemic. This period provides a basis for analysing the changes in the portfolios of government bonds issued by non-euro area EU countries, while 2022 is considered the first year after the pandemic. Banks that did not operate continuously during this period, as well as UK banks due to Brexit, were excluded from this analysis.

In addition to data from the EU-wide transparency exercise, the study also used registers maintained by the EBA to identify whether a banking group is present in a host country through a subsidiary or a branch.

Finally, after accounting for these exclusions, we analysed the portfolios of government bonds (including both on- and off-balance sheet items) issued by non-euro area EU countries held by 93 EU banking groups. We analysed the structure of banks purchasing their bonds and how this evolved between 2019 and 2022 for each country, breaking down the purchasers into domestic banks and EU banking groups operating through subsidiaries or branches. The analysis only covered bond portfolios where the value of government bonds issued by a non-euro area EU country exceeded €1 million for a single issuer.

The impact of the COVID-19 pandemic on non-euro area EU government bond holds in EU banking group portfolios

The analysis reveals a heterogeneous group of countries whose government bonds were examined, although the most important common feature is that they remain outside the euro area. While three countries have joined the ERM II mechanism (Bulgaria, Croatia and Denmark), and two joined the banking union (Bulgaria and Croatia), Croatia subsequently joined the euro area on 1 January 2023, with Bulgaria set to follow on 1 January 2025. However, the above differences do not significantly impact the results of the study. A country's ERM II membership, as a precursor to euro adoption, did not automatically translate into increased interest in its government bonds. Instead, the country's credit rating was a greater driver. However, the country rating alone is irrelevant for the purchase of these bonds by the banks domiciled in EU countries (Zaleska 2020, p. 94). According to the current rules for calculating credit risk capital requirements, all government bonds issued by member states in their currencies receive a 0% risk weight, regardless of the rating (Table 1).

Table 1. Ratings of non-euro area EU countries by three global rating agencies and the risk weights assigned to their government bonds

Country	Sovereign credit rating according to			Risk weight of government bonds (%)
	Standard & Poor's	Fitch	Moody's	
Bulgaria	BBB	BBB	Baa1	0
Croatia	BBB+	BBB+	Baa2	0
Czech Republic	AA-	AA-	Aa3	0
Denmark	AAA	AAA	Aaa	0
Hungary	BBB-	BBB	Baa2	0
Poland	A-	A-	A2	0
Romania	BBB-	BBB-	Baa3	0
Sweden	AAA	AAA	Aaa	0

Source: Regulation (EU) No. 575/2013; Fitch Ratings 2024; Moody's 2024; S&P Global 2024.

Maintaining the same risk weight across member states with substantial rating differences between them remains highly controversial. However, for this study, it allows us to conclude that the identified changes in the portfolio composition of government bonds issued during the COVID-19 pandemic were likely driven by factors other than credit ratings. One such factor was the banking group's exposure to the non-euro area country's banking sector. The results below indicate that a group's presence in a country's banking market, either through a subsidiary or a branch, was a decisive factor in increasing or decreasing its exposure to government bonds, and whether the group was present through a subsidiary or a branch of a credit institution.

The countries surveyed were divided into three groups: (1) countries with no domestic banking groups (Bulgaria, Croatia and the Czech Republic), (2) countries with only branches of banking groups from other EU countries and domestic banking groups (Denmark and Sweden), (3) countries with domestic banking groups, as well as branches and subsidiaries of banking groups from other EU countries (Poland, Romania and Hungary).

Bulgaria, Croatia and the Czech Republic

In Bulgaria, only 17 EU banking groups held Bulgarian government bonds during the examined period. Of the nine groups whose portfolios held more than 1% of the total purchased by EU banking groups, only two (Raiffeisenbankengruppe and Nova Ljubljanska Banka) were not present in the Bulgarian banking market. Most of the others had subsidiaries (five groups) or branches (two groups) (Table 2).

Table 2. Bulgarian government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Bulgarian government bonds (as a % of the portfolio of these bonds held by all EU banking groups)				Form of activity in Bulgaria
		2019	2020	2021	2022	
IT	UniCredit	45.3	40.7	40.0	41.0	S
BE	KBC Groep	27.6	26.2	24.3	34.8	S
AT	Raiffeisen Bank International	11.3	11.3	11.1	1.4	S
HU	OTP Bank	5.4	11.3	14.5	11.7	S
GR	Eurobank Ergasias	5.1	4.5	4.5	5.7	S
IE	Citibank Holdings Ireland	1.3	0.9	0.6	0.5	B
AT	Raiffeisenbankengruppe	1.1	1.0	1.0	0.8	–
NL	ING Groep	1.0	1.5	1.5	1.5	B
SI	Nova Ljubljanska Banka	1.0	0.8	0.8	0.7	–
	the other 8	1.0	1.9	1.6	1.8	

B = branch, S = subsidiary.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

Analysis of the banking groups holding Bulgarian government bonds reveals that, despite the outbreak of the COVID-19 pandemic, the three largest holders maintained their market share. While UniCredit, the largest holder, saw a slight decrease in exposure (by nearly 5 percentage points (p.p.)) in 2020, it remained at that level after the end of the pandemic. Only Hungary's OTP Bank, which operates in Bulgaria through a subsidiary, doubled its share in the aggregate portfolio of all EU banking groups holding Bulgarian government bonds.

However, the combined exposure of EU banking groups operating in the country through subsidiaries did not change throughout the pandemic, accounting for approximately 95% of the aggregate portfolio. The exposure of the two groups operating through branches and those not operating in Bulgaria was marginal, although their holdings decreased by a factor of two during the pandemic. In summary, the form of activity of the EU banking group in Bulgaria had a decisive impact on portfolio size. The COVID-19 pandemic did not cause any significant change in the approach of EU banking groups to the purchase of Bulgarian government bonds.

In Croatia, the analysis showed that 15 EU banking groups held Croatian government bonds during the examined period. However, only seven of these groups had a share of Croatian bonds exceeding 1% of the total holdings held by EU banking groups. Notably, five of these seven groups were operating in Croatia through subsidiaries (Table 3).

Table 3. Croatian government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Croatian government bonds (as a % of the portfolio of these bonds held by all EU banking groups)				Form of activity in Croatia
		2019	2020	2021	2022	
IT	UniCredit	41.6	38.4	37.5	27.8	S
IT	Intesa Sanpaolo	22.7	24.2	21.3	17.6	S
AT	Erste Group Bank	18.6	19.5	25.1	22.2	S
DE	Deutsche Bank	6.4	3.8	2.4	2.1	–
AT	Raiffeisen Bank International	6.0	6.0	6.4	6.9	S
HU	OTP Bank	2.7	6.7	5.5	21.9	S
FR	BNP Paribas S.A.	1.1	1.0	1.3	0.6	–
	the other 8	0.8	0.5	0.4	0.9	

S = subsidiary.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

The analysis of Croatian government bond holdings in EU banking group portfolios indicates that the form of activities was a key factor in determining a banking group's exposure to Croatian government bonds. The aggregate portfolio of EU banking groups operating in Croatia through a subsidiary exceeded 90% of the value of the aggregate portfolio of Croatian government bonds held by EU banking groups. During the pandemic, this portfolio increased by almost 5 p.p. In contrast, the share of EU banking groups not operating in Croatia fell below 4% as a result of the pandemic.

Significant changes occurred in the shares of individual banking groups following the end of the COVID-19 pandemic. The leader, with the largest Croatian government bonds portfolio, remained UniCredit, although its share fell by almost 14 p.p. The same was also true for another Italian banking group, Intesa Sanpaolo, whose share fell by more than 5 p.p. At the other extreme, the Hungarian OTP Bank group's share increased by a factor of eight, from nearly 3% to almost 22%.

This increase aligns with the group's noticeable increase in interest during the pandemic in government bonds of neighbouring countries, including Bulgaria and Romania, where it also operates through subsidiaries. Thus, despite these individual differences, the overall trend during the COVID-19 pandemic was an increase in the share of Croatian government bonds held by EU banking groups operating in the country through a subsidiary.

Czech government bonds were held in the portfolios of 19 EU banking groups. Of these, only seven groups had a share exceeding 1% of the total Czech government bonds held by EU banking groups. Notably, all of these groups operated in the Czech Republic either through subsidiaries (five groups) or through branches (two groups) (Table 4).

Table 4. Czech government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Czech government bonds (as a % of the portfolio of these bonds held by all EU banking groups)				Form of activity in the Czech Republic
		2019	2020	2021	2022	
BE	KBC Groep	65.4	34.1	32.9	31.6	S
AT	Erste Group Bank	19.0	34.4	40.4	38.7	S
FR	Société Générale	7.3	14.9	15.5	16.1	S
IT	UniCredit	3.0	5.5	4.2	7.2	S
AT	Raiffeisen Bank International	2.4	5.8	4.4	3.5	S
NL	ING Groep	0.5	2.2	0.1	1.0	B
IE	Citibank Holdings Ireland	0.1	1.2	1.1	1.0	B
	the other 12	2.3	1.8	1.3	1.0	

B = branch, S = subsidiary.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

The conclusions of the analysis of the portfolio of Czech government bonds held by EU banking groups are similar to those regarding Croatian government bonds. Similarly, the portfolio of Czech government bonds in EU banking groups was concentrated (97%) in banking groups that operated in the Czech Republic through a subsidiary. Unlike Croatia, however, this share did not change during the pandemic. Despite this stability, as in Croatia, there were significant changes in the holdings of individual banking groups. KBC Groep, which was the leader before the pandemic, reduced its share by a factor of more than two, resulting in Erste Group Bank becoming the post-pandemic leader with a share of 38.7% (an increase of almost 20 p.p.). Aside from the KBC Groep, the portfolio of Czech government bonds in EU banking groups indicates that only groups operating in the local market are interested in purchasing local government bonds, and the scale of this exposure was determined by their operational structure; for example, the share of EU banking groups operating through branches was marginal.

Denmark and Sweden

In Denmark, the market is served not only by three Denmark-based banking groups, but also by branches of three other EU banking groups from other countries. No subsidiaries of foreign banking groups are present in the Danish market. Furthermore, during the analysed period, Danish government bonds (with a share exceeding 1% of the value of the aggregate portfolio held by EU banking groups) were found in the portfolios of four banking groups that do not even have a branch in Denmark (Table 5).

Table 5. Danish government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Danish government bonds (as a % of the portfolio of these bonds held by all EU banking groups)				Form of activity in Denmark
		2019	2020	2021	2022	
FI	Nordea Bank	28.4	9.0	8.8	9.6	–
DK	Danske Bank	24.2	41.8	40.3	33.7	D
DK	Nykredit Realkredit	20.3	19.5	16.9	20.1	D
DK	Jyske Bank	11.3	13.6	12.0	8.5	D
SE	Skandinaviska Enskilda Bank-en	4.6	4.4	9.6	15.4	B
FR	Groupe Crédit Agricole	2.7	3.3	3.0	5.9	–
FR	BNP Paribas S.A.	2.0	3.0	2.5	4.7	B
FR	Société Générale	1.8	2.1	1.5	0.1	–
ES	Banco Santander	1.3	1.1	1.9	0.0	B
FR	Groupe BPCE	1.3	0.2	1.8	0.4	–
	the other 8	2.0	2.2	1.7	1.7	

B = branch, D = domestic.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

The analysis of the portfolio of Danish government bonds held by EU banking groups is more complex than those for Bulgarian, Czech or Croatian bonds. This is due to the presence of three Denmark-based banking groups whose combined share in the Danish government bond portfolio held by all EU banking groups already exceeded 55% before the pandemic. During the pandemic, their combined rose to over 62%, reaching a temporary peak of almost 75% in 2019.

The most notable event occurred in 2019, when the Finnish banking group Nordea Bank, the largest holder at the time, reduced its portfolio by more than a factor of three (from 28.4% to 9.0%). However, while the two Danish banking groups (Nykredit Realkredit and Jyske Bank) hardly changed their shares, Danske Bank almost doubled its share, becoming the new leader. This clearly illustrates the different attitudes of banking groups that do not operate in a specific country (even through a branch) compared to those that are based in this country.

Interestingly, the sharp reduction in the Danish government bond portfolio did not involve groups other than Nordea Bank, which, like Société Générale and Groupe BPCE, did not have a branch in Denmark. In fact, Groupe Crédit Agricole even increased its share slightly. It is important to note that Nordea Bank's original exposure was several times higher than that of these other groups. Additionally, the combined share of Danish government bonds held by EU banking groups operating in Denmark through a branch increased from less than 8% before the pandemic to over 20% afterwards.

In summary, the case of the Danish bond portfolio confirms that the form of activity significantly impacts both portfolio size and the behaviour of the respective banking group during the COVID-19 pandemic.

The Swedish government bond market was similar to the Danish government bond market. This similarity was mainly due to the predominance of local banking groups among the nine banking groups holding Swedish government bonds, whose share in the aggregate portfolios of all EU banking groups exceeded 1% in the examined period. Local banking groups accounted for a combined share ranging between 70% and 76%, while the remaining Swedish government bonds were exclusively held by EU banking groups operating in the country through a branch. As in Denmark, there were no subsidiaries from banks from other EU countries (Table 6).

Table 6. Swedish government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Swedish government bonds (as % of the portfolio of these bonds held by all EU banking groups)				Form of activity in Sweden
		2019	2020	2021	2022	
SE	Skandinaviska Enskilda Banken	30.9	31.3	35.1	37.6	D
SE	Kommuninvest	22.1	22.7	23.5	23.4	D
FI	Nordea Bank	13.1	7.1	7.5	7.7	B
DK	Danske Bank	12.1	16.2	13.1	12.9	B
SE	Svenska Handelsbanken	7.0	6.5	6.4	5.6	D
SE	Swedbank	6.1	8.3	4.9	4.1	D
SE	SBAB Bank	3.5	2.6	3.9	3.4	D
FR	Groupe Crédit Agricole	1.6	1.3	1.8	2.2	B
SE	Länsförsäkringar Bank	0.6	0.6	1.7	1.2	D
	the other 12	2.9	3.4	2.1	2.0	

B = branch, D = domestic.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

During the COVID-19 pandemic, the share of local banking groups in the aggregate portfolio of Swedish government bonds held by EU banking groups increased to over 75%. This rise was primarily due to Skandinaviska Enskilda Banken, whose share increased by almost 7 p.p. In contrast, the shares of some local banking groups, such as Kommuninvest and Länsförsäkringar Bank, increased only slightly, while Svenska Handelsbanken, Swedbank and SBAB Bank experienced slight declines.

The combined share of EU banking groups operating through a branch and holding more than 1% of the value of Swedish government bonds held in EU banking groups' portfolios declined by 4 p.p. during the pandemic. However, this was mainly due to Nordea Bank, which reduced its share by almost a factor of two, with other such groups slightly increasing their share. This situation with the Nordea Bank group is unusual for the Swedish market but reflects a common trend among most banking groups operating in non-euro area EU countries through branches. This shift was attributed to Nordea relocating its head office from Stockholm to Helsinki, which was completed just before the pandemic (in October 2018) (Nordea Bank 2018, p. 1), resulting in a change of the group's home country from Sweden to Finland, which reduced its interest in Swedish government bonds.

Poland, Romania and Hungary

The Polish government bonds held in the portfolios of EU banking groups present the most complex scenario for three reasons: (1) Numerous groups held these bonds: there were 37 in total, including 13 with a share in the aggregate of all portfolios that exceeded 1%, (2) these groups operated in Poland both as domestic banks (Powszechna Kasa Oszczędności BP and Bank Polska Kasa Opieki) and through subsidiaries and/or branches, and (3) Polish government bonds were in the portfolios of groups that did not operate in Poland.

The analysis did not include the portfolio of Polish government bonds held by the global Citibank group, as the Polish subsidiary (Bank Handlowy w Warszawie) was a direct subsidiary of the US company Citibank Overseas Investment Corporation throughout the examined period. It was not until 15 November 2023 that it became a subsidiary of the EU banking group Citibank Europe (Bank Handlowy w Warszawie 2023, p. 1) (Table 7).

When analysing the impact of EU banking groups' operational form on their interest in Polish government bonds during the COVID-19 pandemic, we should first consider the behaviour of domestic banking groups. Their actions were virtually identical to those of all banking groups in their home markets in the non-euro area EU countries surveyed. As a result of the pandemic, the share of Polish government bonds in the portfolios of domestic banking groups increased relative to the aggregate portfolios of all EU banking groups. For example, in Denmark, this increase was chiefly due to one group (Powszechna Kasa Oszczędności BP), while the other group (Bank Polska Kasa Opieki) slightly reduced its share.

Unlike Danish and Swedish government bonds, the combined share of Polish government bonds in the portfolios of domestic banking groups never exceeded 50% of the aggregate value held by EU banking groups. This is primarily due to the strong interest in Polish government bonds from EU banking groups operating in Poland through subsidiaries. The combined share of Polish government bonds held by seven groups of this type between 2019 and 2021 oscillated around 50%. However, it fell to below 45% in 2022, mainly as a result of two banking groups (BNP Paribas and Banco Comercial Português) drastically reducing their holdings in the Polish government bond portfolio. Banco Comercial Português completely abandoned these bonds in 2022), while other groups maintained their holdings at pre-pandemic levels (ING Groep) or slightly increased them (Commerzbank).

Table 7. Polish government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Polish government bonds (as a % of the portfolio of these bonds held by all EU banking groups)				Form of activity in Poland
		2019	2020	2021	2022	
PL	Powszechna Kasa Oszczędności BP	26.9	26.5	31.4	36.0	D
PL	Bank Polska Kasa Opieki	13.2	13.7	12.4	11.4	D
ES	Banco Santander	10.6	12.3	12.7	11.3	S
FR	BNP Paribas S.A.	10.2	7.9	8.0	6.7	S/B
DE	Commerzbank	9.6	11.2	11.1	12.8	S
NL	ING Groep	9.5	11.2	9.3	9.7	S
PT	Banco Comercial Português	6.4	4.6	4.3	0.0	S
DE	Deutsche Bank	2.2	2.2	1.8	2.5	S
BE	KBC Groep	1.7	1.5	1.2	1.1	–
AT	Erste Group Bank	1.4	1.2	0.9	0.9	–
IT	UniCredit	1.4	1.2	0.9	1.3	–
FR	Société Générale	1.3	1.2	1.1	1.2	B
FR	Groupe Crédit Agricole	1.2	1.3	1.1	1.5	S
	the other 24	4.4	4.0	3.8	3.5	

B = branch, S = subsidiary, D = domestic.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

Before the pandemic, the share of EU banking groups in the portfolio of Polish government bonds exceeded that of Polish banking groups by approx. 10 p.p. However, after the pandemic, the situation reversed, with the Polish banking groups having an almost 3 p.p. edge. Both for EU banking groups operating in Poland only through a branch (Société Générale) and the three groups without any branch in Poland, the combined share of portfolios of Polish government bonds in the aggregate portfolio held by all EU banking groups decreased by slightly more than 1 p.p. to just under 5.0%.

In summary, changes in the share of portfolios of each type of banking group in the aggregate portfolio of Polish government bonds depended on the form of activity of the group in Poland. Generally, domestic groups increased their exposure, groups operating through subsidiaries maintained their share at pre-pandemic levels, and groups operating through a branch or without a presence decreased their share.

The market for Romanian government bonds most closely resembles that of Polish government bonds among non-euro area EU countries. This is primarily due to the composition of major bondholders. Among the 11 EU banking groups holding Romanian government bonds with a share exceeding 1% in the aggregate portfolios of all EU banking groups, those that operated in Romania through a subsidiary or branch predominated. While the only local banking group did have a significant presence in this market, its share was lower than that of local banking groups in the Polish government bond market (Table 8).

Table 8. Romanian government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Romanian government bonds (as a % of the portfolio of these bonds held by all EU banking groups)				Form of activity in Romania
		2019	2020	2021	2022	
RO	Banca Transilvania	27.0	30.6	27.4	25.8	D
AT	Erste Group Bank	25.4	22.0	24.8	23.5	S
FR	Société Générale	12.4	11.9	11.8	7.6	S
IT	UniCredit	9.1	8.8	9.0	9.1	S
AT	Raiffeisen Bank International	7.7	7.7	9.4	8.3	S
IE	Citibank Holdings Ireland	6.5	4.8	3.8	3.9	B
NL	ING Groep	4.8	6.0	5.6	14.1	B
ES	BBVA	2.0	1.6	1.6	1.7	S
IT	Intesa Sanpaolo	1.7	1.5	1.6	1.3	S
GR	Alpha Bank	1.1	1.1	1.2	1.0	S
HU	OTP Bank	0.5	1.5	2.2	2.4	S
	the other 10	1.8	2.5	1.8	1.5	

B = branch, S = subsidiary, D = domestic.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

Analysis of the behaviour of Romanian government bond holders during the COVID-19 pandemic shows that, with the outbreak of the pandemic in 2020, the share of the only Romanian banking group, Banca Transilvania, in the aggregate portfolio of Romanian government bonds held by EU banking groups temporarily increased. However, after the end of the pandemic, this share was slightly lower than before the outbreak. EU banking groups operating in Romania through a subsidiary behaved similarly; their share rose in 2021, and the fall in their share between the year after the pandemic and the year before was greater than that of Banca Transilvania.

The last group of entities with more than 1% of the value of the Romanian government in their portfolios comprised those operating in the country through branches. The first of these groups, Citibank Holdings Ireland, behaved typically for this type of entity during the pandemic in non-euro area EU countries, reducing its share by 2.5 p.p. In contrast, ING Groep behaved unusually, significantly increasing its exposure to Romanian government bonds from less than 5% before the pandemic to more than 14% afterwards. However, this increase was due to the overall scale of the group's activity in Romania, which is substantial despite the group operating in this market only through branches and not a subsidiary.

The Hungarian government bond market was similar to that of the Polish and Romanian markets. There were 12 banking groups whose share in the aggregate portfolios of all EU banking groups exceeded 1% in the examined period. They included a local banking group (OTP Bank), EU banking groups operating through a subsidiary and/or a branch, as well as groups not directly present in the market (Table 9).

Table 9. Hungarian government bonds in the portfolios of EU banking groups

The group's country of origin	Banking group	Portfolio of Hungarian government bonds (as a % of the portfolio of these bonds held by all EU banking groups)				Form of activity in Hungary
		2019	2020	2021	2022	
BE	KBC Groep	20.6	19.4	20.2	10.4	S
AT	Erste Group Bank	19.4	10.4	24.6	11.3	S
IT	UniCredit	14.8	9.5	12.4	7.2	S
IT	Intesa Sanpaolo	12.4	4.8	6.3	3.8	S
AT	Raiffeisen Bank International	8.1	4.5	4.4	3.9	S
HU	OTP Bank	7.3	38.0	10.1	44.4	D
IE	Citibank Holdings Ireland	5.9	3.2	3.9	5.3	B
NL	ING Groep	4.1	1.7	2.6	3.1	B
FR	Groupe BPCE	2.5	1.6	3.2	2.0	–
FR	BNP Paribas S.A.	1.5	3.7	4.8	2.6	S/B
DE	Commerzbank	1.2	0.8	0.3	0.2	–
DE	Deutsche Bank	0.6	0.5	4.1	3.6	B
	the other 9	1.6	2.0	3.1	2.3	

B = branch, S = subsidiary, D = domestic.

Source: author's calculations based on European Banking Authority 2024a; 2024b.

The analysis of changes in the interest of Hungarian government bond holders during the COVID-19 pandemic is the most prominent example of the differing approaches of local banking groups compared to foreign ones. During the pandemic, the share of the Hungarian OTP Bank group in the aggregate portfolio of Hungarian government bonds held by EU banking groups increased from just over 7% to over 44%. This was, of course, accompanied by a nearly 39 p.p. fall in the share of EU banking groups operating only through a subsidiary. Interestingly, the share of EU banking groups operating through a branch, or through a branch and a subsidiary (BNP Paribas), increased by almost 3 p.p.

However, it is important to note that while the trend that was observed – an increase in the share of domestic banking groups holding Hungarian government bonds in the aggregate portfolios of all EU banking groups and a decrease in the share of EU banking groups – was also characteristic of the Polish and Romanian government bond markets, the scale of these changes was markedly different. The increase in OTP Bank group's share by more than a factor of six is unparalleled in other markets. This significant growth was due to the specific conditions in Hungary and the government's influence on the OTP Bank group's policy.

Discussion

To summarise, while it is difficult to identify universal conclusions for all non-euro area EU countries, significant similarities can be observed within the three country groups identified (Table 10).

Table 10. Changes in EU banking groups' shares in the aggregate portfolio of government bonds by type of banking activity during the COVID-19 pandemic

Group of countries	Bond issuer	Changes in EU banking groups' shares in the aggregate portfolio of government bonds by type of banking activity during the COVID-19 pandemic			
		domestic	subsidiary	branch	no activity
I	Bulgaria	n/a	no change	no change	no change
	Croatia	n/a	increase	n/a	decrease
	Czech Republic	n/a	no change	no change	n/a
II	Denmark	increase	n/a	increase	decrease
	Sweden	increase	n/a	decrease	n/a
III	Poland	increase	decrease	no change	decrease
	Romania	no change	decrease	increase	n/a
	Hungary	increase	decrease	increase	n/a

Source: author's calculations.

In the first group of countries, which have no domestic banking groups (Bulgaria, Croatia and the Czech Republic), only Croatia saw an increase in the share of subsidiaries of EU banking groups in the aggregate portfolio of government bonds held by all EU banking groups. In the other countries in this group, the COVID-19 pandemic did not cause any significant change in the approach of foreign banking groups to the purchase of local (Bulgarian and Czech) government bonds. It must be noted, however, that the group's form of activity had a decisive impact on the size of the portfolio held. In all these countries, the share of subsidiaries of EU banking groups accounted for more than 92% of the aggregate portfolio of government bonds held by all EU banking groups throughout the examined period.

In the second group of countries, which comprised domestic banking groups and branches of banking groups from other EU countries (Denmark and Sweden), there was an average increase of approx. 5.5 p.p. in the share of domestic banking groups in the aggregate portfolio of government bonds held by all EU banking groups as a result of the COVID-19 pandemic. The share of EU banking group branches increased for Danish government bonds but decreased for Swedish government bonds. Notably, if we exclude Nordea Bank – whose decreased interest in Swedish government bonds was mainly due to its head office relocating from Stockholm to Helsinki, thus changing the home country from Sweden to Finland – the share of branches in Sweden also increased. As in the first group of countries, domestic banking groups dominated the structure of holders of local government bonds. Their share ranged from 56–75% for Danish government bonds and from 70–76% for Swedish government bonds over the entire examined period.

In the third group of countries, where domestic banking groups, as well as branches and subsidiaries of banking groups from other EU countries, operated (Poland, Romania and Hungary), the share of domestic banking groups in the aggregate portfolio of government bonds held by all EU banking groups generally increased (or stabilised in the case of Romania) as a result of the COVID-19 pandemic. However, this increase was varied significantly. For Polish government bonds, it was only 7 p.p., while in Hungary, it was as much as 37 p.p., largely due to the general situation there and the government's influence on OTP Bank group's policies. In all the countries in this group, the share of subsidiaries of banking groups from other EU countries in the aggregate portfolio of government bonds held by all EU banking groups decreased throughout the examined period, and the share of branches of EU banking groups increased or stabilised (Poland). The share of banks with branches ranged between 9% and 18% for Romania and Hungary, respectively, and below 2% for Poland.

Conclusions

The analysis of the impact of the form of activities of EU banking groups on their decisions to purchase non-euro area EU government bonds during the COVID-19 pandemic led to the following conclusions:

1. The EU banking groups' decisions were largely determined by the nature of their activities in the local markets of the countries surveyed.
2. Given the significant differences in EU banking group activities among the non-euro area EU countries (i.e. domestic entities, subsidiaries, branches), it is difficult to identify universal conclusions for all these non-euro area EU countries. Nonetheless, significant similarities can be observed within the three country groups identified:
   A. In the non-euro area EU countries with no domestic banking groups (Bulgaria, Croatia and the Czech Republic), the COVID-19 pandemic did not result in any significant changes in the approach of EU banking groups to the purchase of local government bonds.
   B. In the non-euro area EU countries with domestic banking groups and only branches of banking groups from other EU countries (Denmark and Sweden), there was a marked increase in the share of domestic banking groups in the aggregate portfolio of government bonds held by all EU banking groups as a result of the COVID-19 pandemic.
   C. In non-euro area EU countries with domestic banking groups, as well as branches and subsidiaries of banking groups from other EU countries (Poland, Romania and Hungary), the share of the domestic banking groups in the aggregate portfolio of government bonds held by all EU banking groups generally increased (or stabilised) as a result of the COVID-19 pandemic. By contrast, the subsidiaries of banking groups from other EU countries decreased.

3. During the COVID-19 pandemic, domestic banking groups exhibited the lowest resistance to the moral suasion of non-euro area EU countries to purchase their government bonds. Their combined share in the portfolio of a specific issuer's government bonds held by all EU banking groups increased across nearly all the countries surveyed. However, an extreme case was Hungary, where government influence on the OTP Bank group's policies resulted in an increase in its share by more than a factor of six.

The objective of this research was to assess how the form of activities of EU banking groups impacted their decisions to purchase non-euro area EU government bonds during the COVID-19 pandemic. This objective was achieved through an analysis of portfolios of government bonds (including both on- and off-balance sheet items) issued by non-euro area EU countries and held by 93 banking groups from EU countries. For each country surveyed, we analysed the structure of banks purchasing the bonds issued by that country and how this evolved between 2019 and 2022, categorising the purchasers into domestic banks and EU banking groups operating through subsidiaries or branches.

The added value of the analysis is that it confirms the hypothesis that the decisions taken by EU banking groups during the COVID-19 pandemic to purchase the government bonds of non-euro area EU countries were determined by their activities in the local markets of the countries surveyed. However, given the significant differences in EU banking group activities among the non-euro area EU countries (i.e. domestic entities, subsidiaries, branches), specific conclusions were made separately for the three country groups that were identified among the countries surveyed.

Another added value of the analysis was also to indicate that domestic banking groups exhibited the lowest resistance of EU banking groups to the moral suasion of non-euro area EU countries to purchase their government bonds during the COVID-19 pandemic. Their combined share in the portfolio of a specific issuer's government bonds held by all EU banking groups increased across nearly all the countries surveyed. Our results Are consistent with similar research conducted after the 2008 crisis by Altavilla, Pagano and Simonelli (2017, p. 2103). They noted that moral suasion on banks is persistent and intensifies during disturbances and crises.

Further in-depth research into the moral suasion of non-euro area EU countries on banks operating within their borders would be beneficial. Such research should consider additional elements such as bank size, its systemic importance, and its solvency and liquidity parameters. It would also be interesting to simulate how changes in risk weighting of non-euro area EU government bonds based on their actual level of risk could affect the effectiveness of moral suasion.

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Forma działalności unijnych grup bankowych a portfel rządowych papierów wartościowych w czasie pandemii COVID-19 – przypadek krajów UE spoza strefy euro

Celem artykułu jest ocena wpływu formy działalności unijnych grup bankowych na decyzje w zakresie nabywania rządowych papierów wartościowych krajów UE spoza strefy euro podczas pandemii COVID-19. Efektem badania jest także określenie odporności unijnych grup bankowych na „perswazję moralną" krajów UE spoza strefy euro w zakresie nabywania ich obligacji skarbowych. Analizie poddano portfele skarbowych papierów wartościowych (obejmujące zarówno pozycje bilansowe, jak i pozabilansowe) wyemitowanych przez kraje UE spoza strefy euro, posiadane przez 93 grupy bankowe (dane agregowane na najwyższym poziomie grupy) z krajów należących do Unii Europejskiej. Przeprowadzone analizy wykazały, iż podczas pandemii COVID-19 decyzje podejmowane przez unijne grupy bankowe w zakresie nabywania skarbowych papierów wartościowych krajów UE spoza strefy euro co do zasady były uzależnione od formy działalności tych grup na rynkach lokalnych w badanych krajach, aczkolwiek istotne podobieństwa obserwowane były w ramach wyodrębnionych trzech grup krajów. Najniższa odporność unijnych grup bankowych na „perswazję moralną" krajów UE spoza strefy euro w zakresie nabywania ich obligacji skarbowych dotyczyła zaś krajowych grup bankowych, których łączne udziały w portfelu obligacji skarbowych danego emitenta, posiadanych przez wszystkie unijne grupy bankowe, wzrosła co do zasady we wszystkich badanych krajach.

Słowa kluczowe: unijne grupy bankowe, obligacje skarbowe, perswazja moralna, kraje UE spoza strefy euro