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An Analysis of Bank Fee and Commission Income in the EU and in the Czech Republic in a Low Interest Rate Environment

Karolína Vozková

Charles University, Faculty of Social Sciences, Czech Republic

Petr Teplý

University of Economics in Prague, Faculty of Finance and Accounting, Czech Republic

Abstract

This paper deals with the European banking sector fee and commission income, with a special emphasis on the Czech Republic, in the 2007-2018 period. During this time span, net interest income was declining due to low nominal growth and a long period of low interest rates. We contribute to the literature when comparing the magnitude of fee income across the EU banking sectors. We come to the following key findings. First, we conclude that there is no single optimal fee income strategy. Second, we argue that Czech banks are not abnormally dependent on fee income and their outstanding profitability is rather connected with sound risk management as well as with sufficient liquidity and capital buffers. Third, we find that in the EU, fee income share followed an increasing trend after the 2007-2009 global financial crisis which might be connected with an effort to maintain desired profitability in a low interest rate environment.

Keywords

Bank Performance; Czech Republic; European Union; Fee and Commission Income; Low Interest Rate Environment; Financial Stability

JEL Classification

G21, L25

Introduction

During the last decade, the European banking sector has faced many challenges. These were connected mainly to the global financial crisis, after which many banks were not able to maintain sustainable profits. Net interest income was declining due to low nominal growth and a long period of low interest rates. Still, interest is the main source of income of European banks, whose business is mainly oriented towards traditional commercial banking activities. One way, how the compressed interest margins can be compensated is by increasing fee and commission income, which represents the largest part of non-interest income in European banks. For some banks, the possibility to collect more fees could be closely connected with business activities at which they collect also interest income (ECB, 2016). For banks which are not able to switch to fee-bearing activities (in general activities of investment banks), fees might be complements to interest income rather than its substitutes. Moreover, increasing competition mainly from low-cost banks[1] and a negative attitude of clients pushes this type of fees downwards.[2]

In this paper, we examine the magnitude of net fee and commission income (NFCI) in the EU, with a special emphasis on the Czech Republic. We analyse the evolution of NFCI of the European banking sector in years 2007 to 2018.[3] We examine the impact of market concentration on the magnitude of fee income and discuss the profitability of EU banks during the financial crisis and in the post-crisis period. We compare the magnitude of fee income in the Czech Republic with its EU peers and discuss whether Czech banks rely abnormally on fees. Looking closer on the Czech banking sector, we compare income structure of individual banks and describe the differences between traditional and low-cost banking business models.

[1] Low-cost banks are bank whose business model is based on an internet platform. These banks provide only limited portfolio of services, mostly without charging any fees (Hes and Jílková, 2016).
[2] For example in the Czech Republic and Slovakia, a public survey on the most absurd bank fee was organized in years 2005 to 2017 with the aim of creating pressure on banks to reduce or cancel these fees. (see https://www.bankovnipoplatky.com/ankety/nejabsurdnejsi-bankovni-poplatek.html)
[3] For the analysis of bank fee and commission income between 2007 and 2012 see Růžičková and Teplý (2015).

Corresponding author:
Petr Teplý, University of Economics in Prague
Email: petr.teply@vse.cz

The rest of the paper is structured as follows. Section 2 provides a literature review dealing with the causes why banks increase their fee income share as well as with the optimal share of fee income. In Section 3, empirical analysis is provided. The first part of this section deals with the magnitude of banking sector fee income across the EU countries. It also analyses the relation between NFCI and bank's profitability, as well as the impact of increasing competition on the magnitude of banking fees. In the second part of this section, we deal with NFCI in Czech banking sector and examine different fee policies of selected Czech banks. Section 4 summarizes the paper and states final remarks.

Literature Review

There are various reasons, why banks increase their NFCI share. Besides the attempt to diversify the portfolio of supplied services, it might be also connected with the need to substitute decreasing interest income. The literature suggests that increased competition (Moshirian et al., 2011) and prolonged periods of low interest rates (Brei et al., 2019; ECB, 2016) may force banks to switch to fee-bearing activities in order to remain sustainably profitable. Still, it is questionable, whether such changes in provided services leading to replacement of interest income by fee and commission income improves the performance of banks.

Optimal structure of banks' income should lead to increased stability and lower risks. Gambacorta and van Rixtel (2013) differentiate three main banks' business models: i) commercial banks with profits generated mainly on interest income, ii) investment banks with profit largely dependent on non-interest income with NFCI/net total income ratio standardly over 40%, and iii) universal banks which combine commercial and investment banking within one institution. For a long time it was believed that universal banking offers an optimal income diversification and financial stability. In response to the financial crisis the economic costs and benefits of universal banks were reassessed and several restrictions concerning some banking activities under one roof were considered.

The main three alternatives of such separation are as follows: the Volcker rule (2014) in the United States, the Liikanen Report (2012) suggested by the European Commission and the Vickers Commission (2011) proposed in the United Kingdom. The Volcker rule forbids proprietary trading in deposit taking institutions. The restriction is not very broad but is quite strict, because the trading activities are not allowed to exist neither in different subsidiaries within the same group. The Liikanen Report restricts besides the proprietary trading also market-making, but is not so strict. Within the same group, the activities are allowed to be executed in separate subsidiaries. The Vickers Commission's approach is even boarder. It excludes a large set of banking activities from the protected entity, but the activities can exist in different subsidiaries within the group subject to intragroup constraints (Gambacorta and van Rixtel, 2013).

Whether such separation of banking activities would really lead to improved financial stability or whether less diversified banks would be more sensitive to market changes is questionable. The response on this question is probably highly dependent on special features of the market in which the bank operates, on the nature of clients as well as on concrete conditions of the bank. Also the current literature is not unanimous about the optimal share of fee income and the impact of increasing fee and commission income share on banks' stability.

Lepetit et al. (2007) claim "banks expanding into non-interest income activities present higher risk and higher insolvency risk than banks which mainly supply loans". Increased non-interest income may also lead to overall rise in earnings volatility since it is usually more volatile than interest income. The positive link with risk seems to be more accurate for smaller banks and mainly driven by fee and commission activities.

Contrary to statement of Lepetit et al. (2007), Köhler (2012) finds that banks' stability improves with increasing non-interest income and that the effect decreases with the bank size. In his later paper Köhler (2013) finds substantial benefits from income diversification for smaller and more retail-oriented banks in Germany. These banks can become less risky by increasing their reliance on non-interest income. At the same time, larger and more investment-oriented banks should increase their share of interest income to become more stable. This conclusion suggests that universal banking is the most appropriate banking business model.

Smith et al. (2003) state that the income diversification can reduce the risk and stabilize the profitability of banks only if the different types of earnings are independent. Since they found a negative correlation between interest and non-interest income, it seem that non-interest income can stabilize bank's total operating income.

Some of the above claims are supported by findings of US researchers. DeYoung and Rice (2004b) finds that higher reliance on fee-bearing activities tends to increase the volatility of banks' earnings streams. Moreover, DeYoung and Rice (2004a) conclude that well managed commercial banks expand more slowly into non-interest activities. On a related note, Stiroh (2002) claims that greater reliance on non-interest income increases the overall riskiness in banks. He also states that the decreasing volatility of net operating income need not to reflect the diversification benefits from non-interest income, but may be rather connected with reduced volatility of net interest income. Based on the existing literature, no general conclusion about the advantageousness of a specific banking business model and concrete optimal share of fee and commission income can be made.

Empirical analysis

Methodology

In our research we provide a comparative analysis of banking sectors in the EU. To investigate the fee and commission income magnitude, we split the total operating income into three categories. The biggest part of net total operating income in EU banks is represented by net interest income, i.e. generally the difference between interest obtained on issued loans and the interest paid on deposits. Second category is NFCI, which is the biggest part of non-interest income. This type of income is not only connected with standard commercial bank's activities (deposit taking, loans providing), but is mainly obtained as a reward for non-traditional banking services like retail brokerage, insurance sales, securities issuance (in general core businesses of investment banking). The last category is other income that stands for all income of a bank that is different from the previous two, in other words the income from non-core businesses.

Empirical results

The empirical analysis consists of two parts. The first part investigates and compares the magnitude of NFCI across the EU countries. For this purpose NFCI/Net total operating income (NFCI/TI), NFCI/Total assets (NFCI/TA) and NFCI/Gross domestic product (NFCI/GDP) ratios are used. Besides these ratios, we discuss the evolution of banks' profitability measured by Return on equity (ROE) and Return on assets (ROA) and the impact of market concentration on the magnitude of NFCI. We use annual data for the time period from 2007 to 2018. The data were retrieved from the European Central Bank (ECB) database. To make the analysis more accurate, we split the countries into five different groups which are compared to each other. The first group includes all EU countries (EU); the second group consists of states which have adopted the euro as their common currency (EUROZONE); the third group is represented by Central and Eastern Europe countries (CEE) [4]; the fourth group contains countries which were the most hit by the financial crisis in 2008 and were unable to refinance their government debt or to bail out over-indebted banks on their own during the crisis (PIIGS) and the last group consists solely of the Czech Republic.

The second part of the empirical analysis deals with the fee and commission income in the Czech Republic. The data were obtained by ECB and annual reports of individual banks. We comment on the development of the fee income of Czech banks between 2007 and 2018. We compare the fee strategies of individual Czech banks and we discuss how they changed over last few years. Unlike many EU countries, the Czech banking sector has reported high capital and liquidity buffers in recent years as highlighted by CNB (2019).

To assess the dependence of banks in individual EU countries on bank fees, we construct three ratios, namely NFCI/TI, NFCI/TA and NFCI/GDP, and compare them between each other. We comment on the development of each ratio over the time period 2007 to 2018 and make general conclusion about the fee income magnitude based on averages of these ratios. The development of NFCI/TI between 2007 and 2018 is depicted in Figure 1. Bigger fluctuation of fee income share can be noticed around the crisis years 2008-2010. After 2010, the NFCI/TI share stabilized with slowly increasing trend in all examined groups. In all groups, we can observe a drop in NFCI/TI in 2009. In this year, NFCI/TI decreased the most in Germany, Luxembourg, Austria and the Czech Republic. In Germany, Austria and the Czech Republic, the drop of NFCI/TI is explained mainly by increase in net total income accompanied with stable or decreasing NFCI. This suggests a quick recovery of these economies after the financial crisis. In Luxembourg, both net total income as well as NFCI declined in 2009, but a relatively higher drop in NFCI caused the whole ratio to decrease.

The pronounced increase in NFCI/TI in 2010 in the PIIGS countries as well as in the EU and the EUROZONE is caused by a single outlying country, namely Ireland. Due to a sharp drop in net total operating income from more than EUR 17 billion to EUR 1.5 billion in 2010, NFCI/TI of Ireland was 117.97%. This post-2008 Irish banking crisis resulted in government bank bailout and later in financial support from the EU and the International Monetary Fund. Without Ireland, the 2010 NFCI/TI values would be in PIIGS 24.77%, in the whole EU 23.95% and in the EUROZONE 24.61%. In other words, neglecting Ireland, the magnitude of NFCI/TI returned to its pre-crisis values already in 2010.

After year 2010, a gradual growth of NFCI/TI among EU countries can be observed, with a more pronounced increase in 2018. This was caused by a decrease in EU banks' average NFCI by 2% accompanied by a 2% increase in net total income. This suggests that EU banks probably compensated the low interest rates by increasing fee and commission income. Compared to its EU peers, the Czech Republic displayed a higher NFCI/TI in pre-crisis period while after the crisis it remained below the EU's average. Moreover, the NFCI/TI of Czech banks was decreasing since 2010. In 2018, it was by almost 7.5 percentage points lower than the EU's average.

[4] Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia

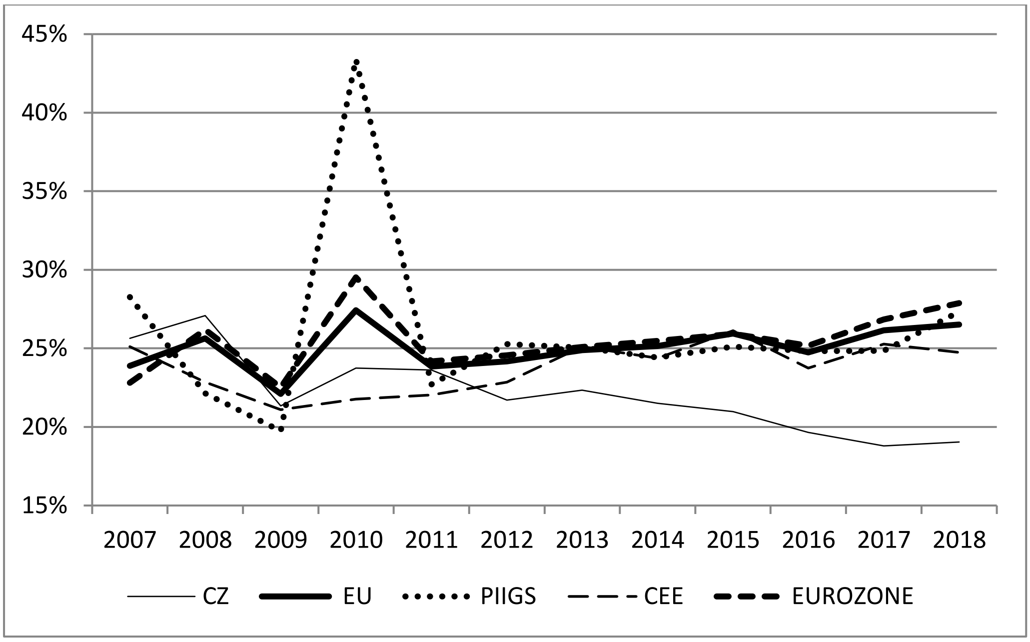

Fig. 1. Development of Net fee and commission income/Total income in the EU between 2007 and 2018

Source: Authors based on the ECB database

Prevailing low fee income share in the Czech Republic compared to the rest of the EU is apparent also from Figure 2 depicting the average NFCI/TI in individual groups of countries between 2007 and 2018. Average NFCI/TI in the Czech Republic is almost by 3 percentage points lower than in the EU. In general, CEE countries have lower than average NFCI/TI. On the other hand, PIIGS exhibit the highest shares of fee income over the examined period. This is heavily influenced by Ireland's NFCI/TI in year 2010 as described above. After exclusion of this outlying value, PIIGS average NFCI/TI would be 24%, EU's average would be 24.78% and EUROZONE's average would be 25.14%. By looking at individual EU countries, only Malta (11.85%), Greece (14.81%), Cyprus (15.55%), Denmark (21.18%), Romania (21.31%) and Bulgaria (21.64%) report lower average fee income shares compared to the Czech Republic.

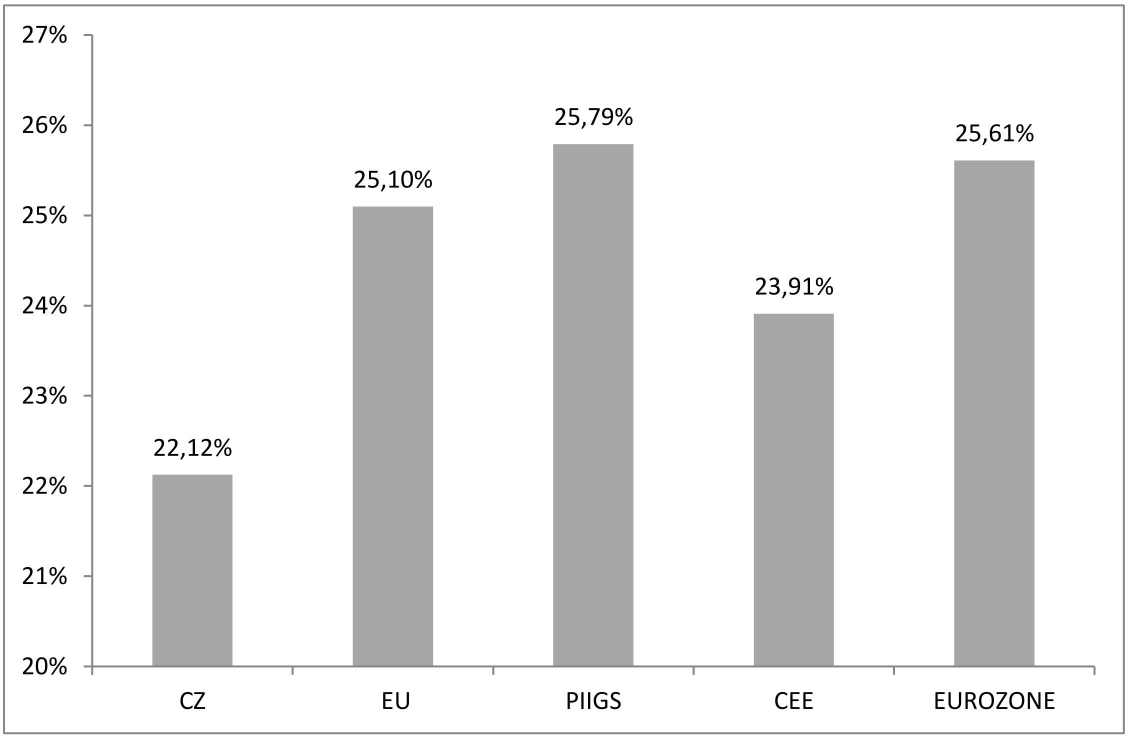

Fig. 2. Development of Net fee and commission income/Total income in the EU between 2007 and 2018

Source: Authors based on the ECB database

Figure 3 and Figure 4 depict the development and average NFCI/TA in time period 2007 to 2018. Average NFCI/TA in the Czech Republic is higher compared to the EU countries by 0.1 percentage points. The only group exceeding Czech NFCI/TA is group of CEE countries. Figure 3 shows that higher NFCI/TI in Czech banking sector was present mainly in years around the financial crisis. After 2010 this ratio exhibited declining trend. More precisely, while in years 2007 to 2010, NFCI/TI in the Czech banking sector was close to 1%, it dropped to nearly 0.5% in 2017. The EU's average was reached in 2015 and after this year, the Czech Republic's NFCI/TI stayed below the EU's values.

Higher values of NFCI/TI in the Czech Republic can be explained mainly by low total assets of the banking sector in past years. This can be illustrated by comparing the Czech Republic with Finland. Both countries exhibit very close absolute amount of NFCI as well as NFCI/TI, but Finnish banking sector has more than twice as high total assets. The continuous decrease in NFCI/TI in the Czech Republic was caused mainly by increasing total assets. While in year 2007, total assets of Czech banks were less than EUR 140 billion; in 2018 the amount almost doubled and reached more than EUR 270 billion. It was caused mainly by interventions of the Czech National Bank which aimed to maintain the exchange rate of Czech koruna to Euro at the level of 27 CZK/EUR. Interventions started in November 2013 and ended in April 2017. The biggest increase in banking total assets was observed in 2017. In this year the interventions were most pronounced. It can be observed on foreign exchange reserves of the Czech National Bank that increased from EUR 81,345 million in 2016 to EUR 123,356 million in 2017 (see the Czech National Bank balance of payments statistics). In general, a pronounced increase in total assets of banking sector between 2007 and 2018 can be observed in CEE countries, while in the rest of the EU, banking assets were rather dropping or constant. An exception is Finland with a rise of total assets by 174%.

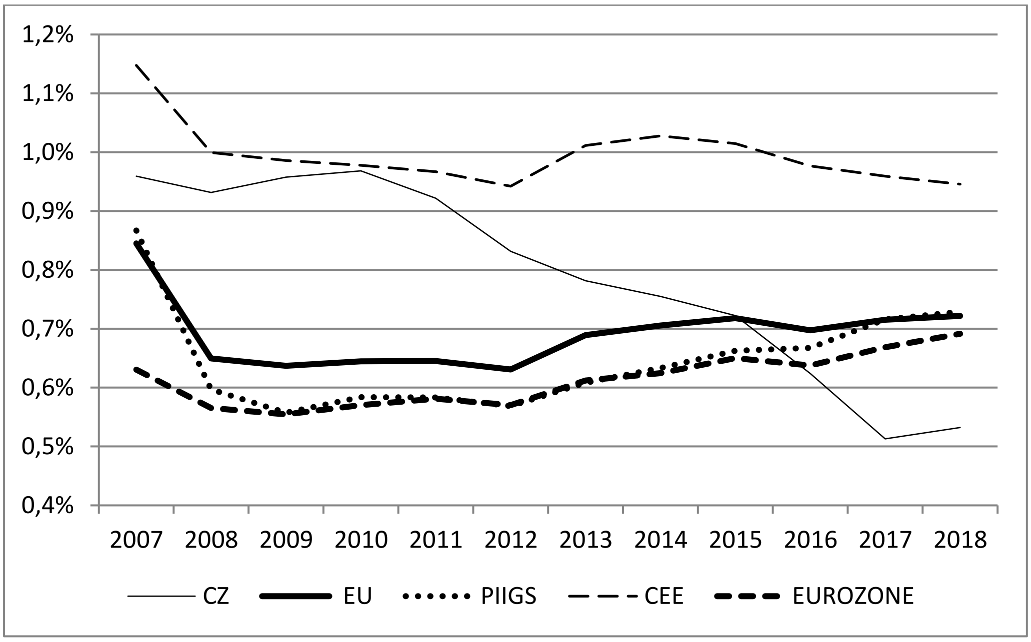

Fig. 3. Development of Net fee and commission income/Total assets in the EU between 2007 and 2018

Source: Authors based on the ECB database

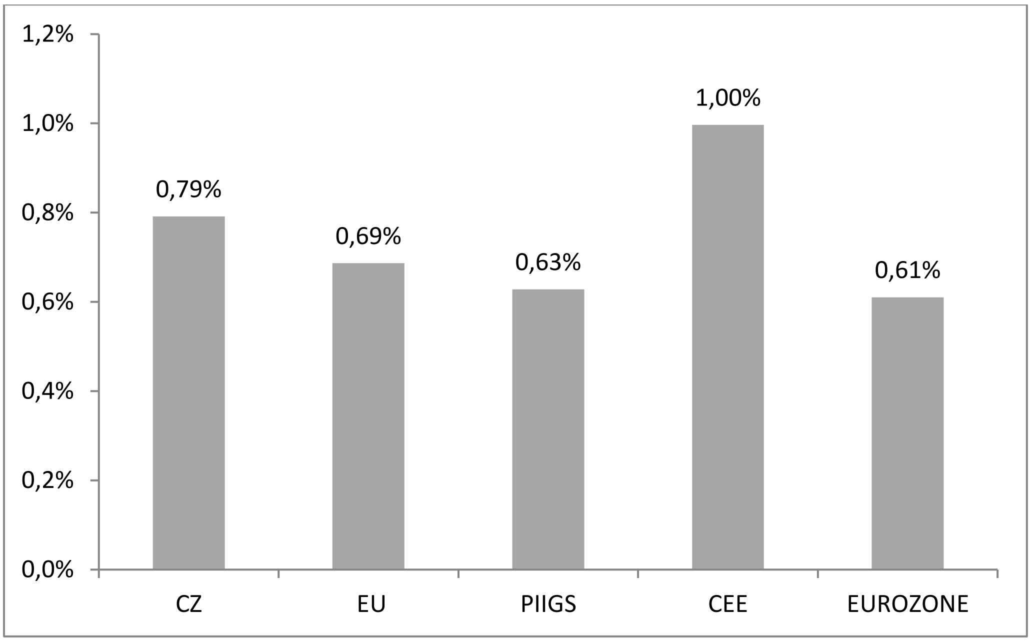

Fig. 4. Net fee and commission income/Total assets in the EU – averages for 2007–2018

Source: Authors based on the ECB database

Last ratio that we use to compare the magnitude of NFCI in the EU countries is NFCI/GDP. Average NFCI/GDP in the Czech Republic is the lowest among the compared groups. Close to Czech values are moving also other CEE countries. The EU's average is almost twice as high as in the Czech Republic. In Figure 5, a high increase in NFCI/GDP can be observed between 2007 and 2008. This is caused by missing data for 2007 for some countries as described above. The decreasing trend of NFCI/GDP observed in all EU countries is mainly explained by increasing GDP.

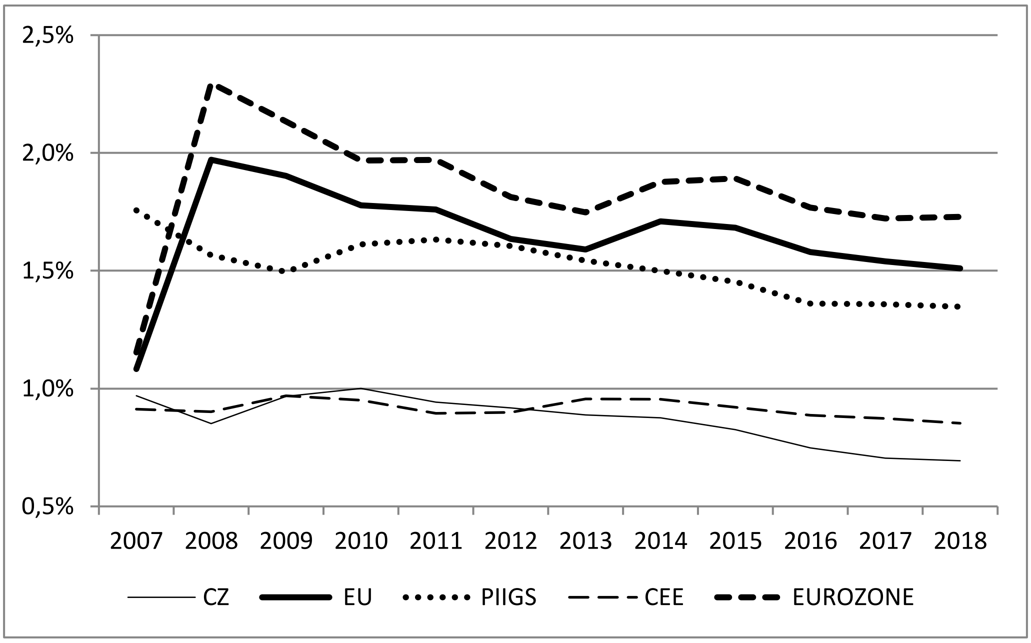

Fig. 5. Net fee and commission income/Total assets in the EU – averages for 2007–2018

Source: Authors based on the ECB database

Discussion and summary of results

Table 1 provides a summary of above discussed results and suggests that banks in the Czech Republic do not abnormally rely on fee and commission income. More precisely, NFCI/TI and NFCI/GDP ratios are lower in the Czech Republic compared to the rest of the EU. Solely NFCI/TA exceeds the EU's average, but this is connected rather with relatively small size of Czech banks than with high NFCI. Moreover, the trend of NFCI/TA in the Czech Republic is decreasing and in recent years also this ratio moved below the EU's average.

Table 1. Average net fee and commission income ratios of different groups of the EU countries compared to the EU's averages in 2007–2018

	NFCI/TI	NFCI/TA	NFCI/GDP
CZ	-	+	-
PIIGS	+	-	-
CEE	-	+	-
EUROZONE	+	-	+

Our empirical findings can be summarized as follows. First, we argue that Czech banks are not abnormally dependent on fee income and their outstanding profitability is rather connected with sound risk management as well as with sufficient liquidity and capital buffers. Second, we find that in the EU, fee income share followed an increasing trend after the 2007-2009 global financial crisis which might be connected with an effort to maintain desired profitability in a low interest rate environment.

Conclusion

This paper focused on the analysis of bank fee and commission income in the European Union with a special emphasis on the Czech Republic. Based on the current literature, we commented on the reasons why banks switch to fee-bearing activities and we discussed the optimal share of fee income. We concluded that there is no single optimal fee income strategy. The result is highly dependent on special features of the bank and the banking sector in which it operates.

In the econometric part, we used ratios of net fee and commission income to net total income, to total assets and to GDP to compare the magnitude of bank fees in the European countries. We also examined how these ratios developed between 2007 and 2018. Average share of income represented by fee and commission is in the EU around 25% which corresponds to the applied commercial banking business model. After the financial crisis in 2008, we can observe a gradual increase in fee income share which might be caused by the prevailing low interest rates and the effort of banks to substitute missing profits from interest income. Moreover, we concluded that Czech banks are generally less dependent on fee income compared to its EU peers and their fee income share exhibits decreasing trend. High profitability and stability of the Czech banking sector can be attributed mainly to sound risk management and sufficient capital and liquidity buffers.

Since increased competition might be a reason why banks reassess their business strategies which is in turn connected with changes in income structure, we also examined the development of market competition in the EU banking sector between 2007 and 2018. We conclude that in this time period the market concentration was moderate. Dealing with new entrants in the Czech banking sector, we described the business strategy of low-cost banks and its impact on fee income share of these banks. We also claim that their originally unsustainable business model was connected mainly with clients' attraction. Nowadays, these banks are in the Czech Republic well established with increasing clientele and are generally operating with black numbers. Besides taking deposits, they began to provide loans and charge fees on some services. Currently, their business model seems to be sustainable and it can be expected that these presently small banks will get bigger in the future.

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