

BANK DIVIDENDS: THE ROLE OF ECONOMIC ENVIRONMENT AND PERFORMANCE

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Purpose: The aim of this paper is to study trends in dividend payments in commercial banks from Central and Eastern Europe. Dividends are explored in the context of country differences as well as temporal developments throughout a long time period.

Design/methodology/approach: The analysis is based on a unique dataset, which includes hand-input data on dividend payments of listed and unlisted banks over the period 2006-2022. Banks in the sample are based in eleven EU countries, which have experienced strong economic growth, but also sizeable recessions in the study period. Dividend payments are studied using two measures, the propensity to pay dividends and the level of dividends. Dividends are explored in relation to the operating environment and to individual bank profitability and equity levels.

Findings: There is heterogeneity in the propensity to pay dividends, as well as the level of dividends, between eleven countries in the region. In general, economic growth is paired with more frequent and higher dividend payments. However, dividends in some countries do not largely differ under weak and strong economic environment. In line with existing literature, dividends are positively associated with profitability and capital. Banks that generate higher earnings and accumulate more equity are more likely to pay dividends and their dividends are higher than at their peers.

Originality/value: The paper shows trends of dividends in banks of Central and Eastern Europe, which have been very rarely studied in existing literature. Most empirical work relates to the US or cross-country samples that do not include Central and Eastern Europe. In addition, many studies base on listed banks, which may have different dividend payment patterns. This study uses banks from a rarely studied region and includes both listed and unlisted banks.

Keywords: dividend payouts, Central and Eastern Europe, commercial banks.

Category of the paper: Research paper.

1. Introduction

Decisions related to dividend payments are among the most significant choices made by managers and shareholders of firms. They play an especially important role in financial institutions. Banks are very heavily regulated, particularly in the area of capital requirements. Dividends directly affect the level of retained earnings that feed into capital, making the decision on dividend payment vital not only to shareholders, but also bank supervisors across the world. Low capital levels may endanger individual bank stability, especially during economic downturns, when new capital is limited and bank portfolios become more risky. Due to a high degree of interconnectedness in the banking sector, higher risk of individual banks is transferred to other banks and overall financial stability may decrease. In consequence, the decisions on dividend payments in banks, especially in turbulent times, are of high importance to individual banks but also banking sectors as a whole (Fahlenbrach et al., 2024). Meanwhile, empirical literature on bank dividends remains relatively limited, especially in terms of developing countries and unlisted banks.

The aim of this paper is to analyse dividend payments of banks in Central and Eastern Europe. We use a unique dataset of hand-input dividend data for a sample of listed and unlisted banks from eleven countries in the region over a period of 2006-2022. We study differences in dividends on the country level and their link with GDP growth. We compare whether banks under weak economic conditions have similar dividends to banks in strong environments. In addition, we consider the role of individual bank profitability and capital levels in dividend decisions across the whole period of analysis.

2. Review of empirical studies on bank dividends

Dividends have been broadly described in both theoretical and empirical literature, but the existing work has largely focused on non-financial entities. Empirical studies regarding banks are much more limited and usually refer to large, listed banks (Abreu, Gulamhussen, 2013; d'Udekem, 2021; Lepetit et al., 2018; Onali et al., 2016; Srivastav et al., 2014; Trinh et al., 2021; Trinh, 2022). There are many studies basing on U.S. bank samples (Abreu, Gulamhussen, 2013; d'Udekem, 2021; Floyd et al., 2015; Johari et al., 2020; Kanas, 2013; Srivastav et al., 2014) and earlier time periods, while cross-country analyses and more recent data remain relatively scarce. There is a limited number of cross-country studies investigating worldwide samples (Acharya et al., 2022; Ashraf et al., 2016; Lepetit et al., 2018), emerging economies (Forti, Schiozer, 2015; Trinh et al., 2021) and European banks (Lepetit et al., 2017; Onali et al., 2016; Belloni et al., 2023). The aim of our analysis is to shed more light on bank dividend

payments in Central and Eastern Europe, a region which has been rarely studied in this literature.

In existing literature regarding banks, dividend payouts are related to several groups of factors. These groups include bank-specific financial factors, the operating environment and the institutional environment. Bank-specific factors comprise bank profitability, general performance, bank size or risk levels. The link between dividend payments and bank profitability is among the most frequently analysed and shows the most consistent results. Dividend payouts are positively associated with bank profitability in a number of studies (Abreu, Gulamhussen, 2013; Belloni et al., 2023; Johari et al., 2020; Lepetit et al., 2018; Onali et al., 2016, Srivastav et al., 2014; Trinh et al., 2021). When banks record high earnings, they are more willing to pay dividends and the dividend level is more elevated than during periods of weak profits. Large banks are also found to pay higher dividends than smaller entities (Abreu, Gulamhussen, 2013; Belloni et al., 2023; Forti, Schiozer, 2015; Lepetit et al., 2018; Trinh et al., 2021). This may be due to the fact that large banks are usually listed and have numerous large shareholders, which expect regular dividend payments. They are also more closely monitored by capital market participants and the general public, so a reduction or avoidance of dividend payments in large banks is more discussed on the market and increases the pressure on payouts.

Higher dividend levels are observed for banks with more capital (Abreu, Gulamhussen, 2013; Belloni et al., 2023; Chronopoulos et al., 2023; Johari et al., 2020; Lepetit et al., 2018). When banks have higher equity levels, they do not need to further increase them through retained earnings and may distribute more income in the form of dividends. For weakly capitalised banks, paying dividends implies a further decrease in the capital base and may endanger a bank's financial stability. If losses materialise, the bank will not have a sufficient capital buffer to cover them. In consequence, banks with weak capital may be required by bank supervisors to withhold dividend payments, until they regain a sound capital cushion.

Banks relying more on uninsured debtholders, rather than insured depositors, pay more dividends (Lepetit et al., 2018) and an increase in insured deposits may be associated with lower dividends (Johari et al., 2020). Higher dividends are positively linked to institutional investor deposits (Forti, Schiozer, 2015). The link between bank risk and dividend payments is negative in most studies (Chronopoulos et al., 2023; Forti, Schiozer, 2015; Johari et al., 2020; Lepetit et al., 2017; Lepetit et al., 2018), although Onali (2014) finds a positive association. Dividends may also be related to bank shareholder structure, with a negative link identified between payouts and ownership concentration (Abreu, Gulamhussen, 2013), as well as government ownership (Onali et al., 2016) and foreign ownership (Forti, Schiozer, 2015). External factors in the banking environment also matter, such as the competition in the banking sector (Chronopoulos et al., 2023; De Cesari et al., 2024; Lepetit et al., 2018), the regulatory framework relating to investor protection and creditor rights (Lepetit et al., 2018) and the political situation (Fahlenbrach et al., 2024).

There is a number of studies that explore dividend payments under adverse economic conditions. High dividends reduce bank capital and may contribute to the fragility of the financial system, especially during economic downturns. Despite this, Acharya et al., (2022) and Floyd et al., (2015) demonstrate that some banks continued to pay high dividends during the global financial crisis (GFC). Floyd et al. (2015) find that during the GFC, banks were more prone to increase dividends and more reluctant to refrain from dividend payouts than industrial entities. Several potential reasons for this are put forward in the literature. Gambacorta et al. (2023) indicate that managers may not object to higher dividend payments, as they decrease the bank capital base and hence automatically increase return-on-equity, which managerial compensation may be based upon. In addition, dividend payouts boost short-term shareholder returns. Acharya et al. (2022) pose that if banks cut dividends, it could be seen as a signal of weakness and this could start a bank run, so dividends continue to be paid even when they should be decreased or stopped.

In parallel, decreasing or stopping dividend distributions increases bank capital and allows to sustain loan growth especially in crisis periods (Gambacorta et al., 2023). Dividend bans implemented in 2020 in the face of the Covid-19 crisis allowed to increase capital and boost loan growth in countries that implemented dividend payout restrictions (Hardy, 2021). A special role is played by minimum capital requirements. Onali (2014) shows that capital adequacy regulations may attenuate the observed positive link between bank risk taking and dividend payouts. Regulatory capital requirements limit dividend payouts, particularly in the case of undercapitalised banks during a financial crisis (Abreu, Gulamhussen, 2013). However, Ashraf et al. (2016) warn that while stringent capital requirements are linked with lower dividend payments and lower probability of excessive dividends in pre-crisis periods, their effectiveness in restricting dividends during the crisis may be limited. As a result, adequate capital requirements should be in place in periods of sound economic growth, to avoid the depletion of capital and increase of financial instability in crisis times.

3. Methodology and data

The aim of this paper is to study patterns of dividend payments in banks in Central and Eastern Europe. We take advantage of a large, hand-input database and use descriptive statistics to present the most important trends in bank dividends between 2006 and 2022. In our analysis, we use two dividend variables. First, we study the propensity to pay dividends, reflected in a binary variable, which equals one when a bank decides to pay a dividend in a given year. Second, we analyse the level of dividends, through an indicator of dividend to net income. This measure is commonly applied in empirical work and reflects the share of net income that banks decide to pay out as dividends. These two dividend proxies relate to similar,

but not identical dividend questions. The first indicates whether the bank decides to pay or withhold dividends, which is an important signal to market participants and investors. The second shows the level of dividends, which is likely to be a function of bank earnings and the operating environment.

In our study, we present dividends in the context of several areas. First, we analyse the heterogeneity of bank dividend payments across the region of Central and Eastern Europe, to show the geographical diversity of dividend policies. Second, we study dividend payment propensity and dividend levels in relation to the macroeconomic environment, proxied by GDP growth. In this part, we consider differences between dividends paid in strong and weak economic environments. We are interested to see if banks in various countries react to economic downturns and upturns similarly in terms of dividend payments. Third, we explore dividend payments in the context of bank performance, accounting for bank profitability and the level of capital. We compare banks with weak and strong performance, in order to observe whether they differ in terms of both the propensity to pay and the level of dividends.

In order to study bank dividends, we use a unique, hand-input dataset. The dataset is comprised of several building blocks. First, we use financial data of commercial banks from the Bureau van Dijk Orbis database for the period 2006-2022. We gather data on banks from eleven Central and Eastern European countries, including Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. The Orbis database includes only very fragmented data on dividend payments. Hence, in the second step, we hand-input the data on dividends, using bank financial reports, annual reports and result presentations available on official bank websites. Third, we merge this data with macroeconomic data taken from the World Bank. Our dataset includes data for commercial banks from eleven countries. The split of bank-year observations is shown in Table 1.

Table 1.

Sample description: countries and number of observations

| Country | Number of observations, 2006-2022 | |
|----------------|-----------------------------------|---------------------------|
| | bank-year observations | share in total sample (%) |
| Bulgaria | 190 | 9.17 |
| Czech Republic | 283 | 13.66 |
| Estonia | 76 | 3.67 |
| Croatia | 263 | 12.69 |
| Hungary | 240 | 11.58 |
| Lithuania | 62 | 2.99 |
| Latvia | 214 | 10.33 |
| Poland | 233 | 11.25 |
| Romania | 137 | 6.61 |
| Slovenia | 195 | 9.41 |
| Slovakia | 179 | 8.64 |
| SUM | 2072 | 100 |

Note. The table shows bank-year observations for the whole period, per country.

Source: own elaboration.

The Central and Eastern European region shows some divergence in terms of the number of banks in various countries. Some countries have large banking sectors with more numerous banks (the Czech Republic, Croatia, Hungary and Poland), while other countries only have several banks and a smaller banking sector (Estonia and Latvia). The main variables used in our study are depicted in Table 2.

Table 2.

Descriptive statistics: the main variables

| Variable | Number of observations | Mean | Standard deviation | Min. | Max. |
|--------------------------|------------------------|-------|--------------------|--------|--------|
| Dividend payment (0 / 1) | 2072 | 0.52 | 0.50 | 0 | 1 |
| Dividend to income (%) | 2072 | 30.52 | 38.29 | 0 | 102.55 |
| ROA (%) | 2072 | 0.75 | 1.24 | -3.40 | 2.73 |
| Equity to assets (%) | 2072 | 10.79 | 4.25 | 4.20 | 23.85 |
| Bank size (EUR mln) | 2072 | 7.05 | 11.13 | 0.01 | 91.73 |
| GDP growth (%) | 2072 | 2.41 | 4.07 | -16.04 | 12.83 |

Note. *Dividend payment* is a binary variable equal to one if there is a dividend payment in a given bank and year; *Dividend to income* is the relation of dividend to net income; *ROA* is the return on assets; *Equity to assets* is the relation of total equity to total assets.

Source: own elaboration.

Descriptive statistics shown in Table 2 indicate that the average dividend payment propensity (*Dividend payment*) is slightly over 50%, indicating that in over half bank-years there is a decision to pay out dividends. Dividends amount to around 30% of net income (*Dividend to income*) and their levels are highly diversified, which is reflected in a relatively high standard deviation. Banks in our sample differ in terms of both profitability and capital. Average return on assets (ROA) is 0.75%, but it varies between banks and years with relatively high losses and high earnings. Mean equity levels are just under 11%, but again we observe large differences throughout our sample. The region has mostly benefitted from sound economic growth in the sample period, but some countries witnessed very severe recessions, including the Baltic states in 2009 recording recessions of over 10%. Summing up, our sample includes a relatively diversified set of banks and countries, including periods of strong economic growth and bank performance, but also economic downturns and net losses in banks. Around half of banks in our sample pay dividends throughout the sample period, while the level of dividend constitutes around 30% of net income on average, with a significant variation of dividend levels across banks.

4. Results

In this section, we present the descriptive statistics, depicting the most important trends in dividend payment propensity and dividend levels in Central and Eastern European banks. First, we show the diversification of dividend payments across the region. Second, we depict dividends in relation to economic growth and third we account for the role of bank profitability and capital.

4.1. Bank dividends across the region

Bank dividends depend on numerous bank-specific and operating environment factors. However, the dividend policy of banks in a country's banking sector also matters for dividend decisions. When most banks in a given country regularly pay dividends and these dividends are high, an individual bank is less likely to refrain from dividend payments or to pay dividends much below the average. In consequence, we first explore differences between national dividend policy in our sample. We present country differences for average dividend payment propensity in Figure 1 and average dividend to income levels in Figure 2.

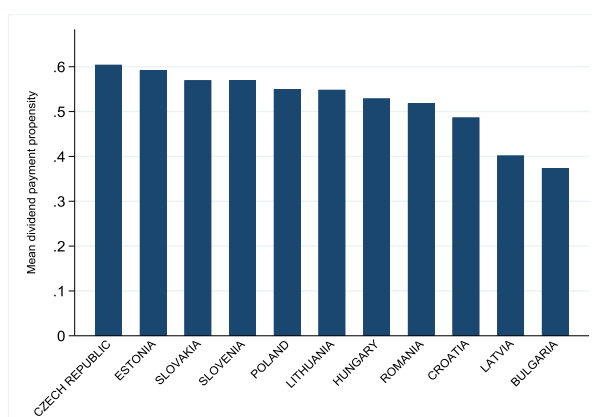


Figure 1. Dividend payment propensity in Central and Eastern European banks.

Source: own elaboration.

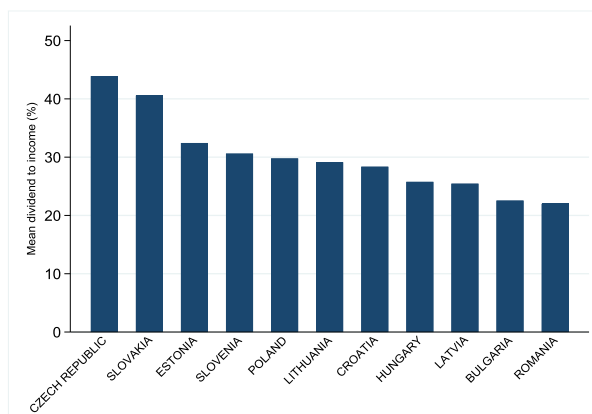


Figure 2. Dividend to income in Central and Eastern European banks.

Source: own elaboration.

We find that there are large differences across countries, when we consider dividend payment propensity (Figure 1). Banks in the Czech Republic and Estonia have an around 60% probability of paying dividends, while Bulgarian and Latvian banks pay dividends only in 40% of cases throughout our sample period. Banks in Slovakia, Slovenia, Poland, Lithuania, Hungary and Romania have an over 50% probability of dividend payments. When we consider the level of dividends (Figure 2), we find that banks in countries with high dividend payment probability have the highest level of dividends. Banks in Czech Republic and Slovakia have the most generous dividend payments, at over 40% of income on average. At the same time, Bulgarian and Romanian banks pay out only slightly over 20% of net income. In conclusion, we find that there is visible heterogeneity between countries in terms of dividend payments.

4.2. Dividends and the macroeconomic environment

In the next step, we explore dividends in terms of their links with economic growth for banks in our sample. We calculate median annual GDP growth for the eleven countries included in our sample. We use the median, instead of the mean, due to large differences in GDP growth between countries, especially in crisis periods. We present dividend payment propensity and GDP growth in Figure 3, while dividend to income and GDP growth is shown in Figure 4.

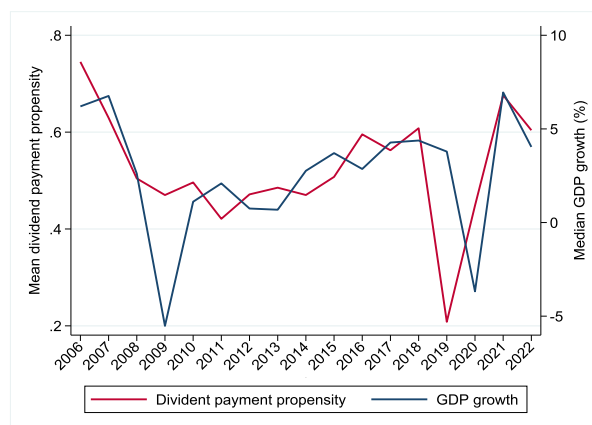


Figure 3. Dividend payment propensity and GDP growth in Central and Eastern European banks.

Source: own elaboration.

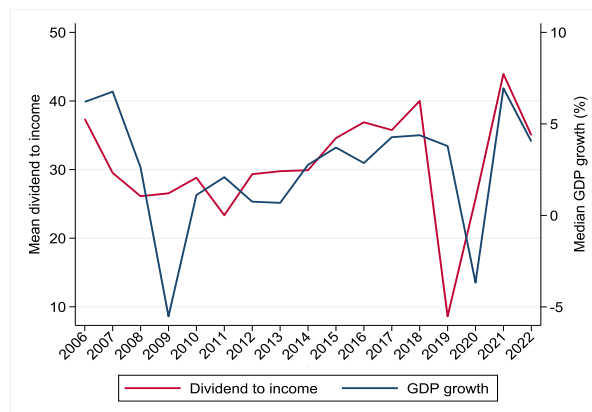


Figure 4. Dividend to income and GDP growth in Central and Eastern European banks.

Source: own elaboration.

In general, we find that trends in economic growth and dividend payments run in the same direction. Periods of economic downturns are linked with a lower propensity to pay dividends and a lower level of dividends, which is visible between 2007 and 2009 and also in 2019 and 2020. Importantly, the decline of dividends during the global financial crisis of 2007-2009 is different than the one seen during the Covid-19 pandemic. During the GFC, dividends decline in line with the economic downturn. In 2019, we observe that dividends seem to fall before the economic downturn takes place. This is due to the unique nature of the exogenous shock, such as the Covid-19 pandemic, and the timing of dividend decisions. The Covid-19 pandemic surfaced in Europe in the first quarter of 2020. The severity of the crisis became immediately visible and the GDP decline for the whole of 2020 was certain in the first quarter of 2020. Dividend decisions in banks regarding the previous financial year, in that case 2019, were taken in the first half of the next year. As a result, dividends for 2019 were drastically cut in the first half of 2020. Hence we observe a seemingly counter-intuitive results of dividends falling prior to the economic downturn.

The period between 2013 and 2019 shows dividends in a sound economic environment, when both the propensity to pay and the level of dividends are increasing. The strong decrease in dividends during the pandemic period is more than compensated after the pandemic, with dividends coming back to very high levels that were visible before the GFC.

In the next step, we consider whether changes in dividend payments during periods of high and low GDP growth are different in various countries. In order to study this, we calculate mean dividend payment propensity and dividend levels per country, for periods when GDP growth is above or below the (country) median for the whole period. In order to account for the lagged decisions regarding dividends, we consider dividends with a one-year lag. The results for dividend payment propensity are depicted in Figure 5, while dividend to income in Figure 6.

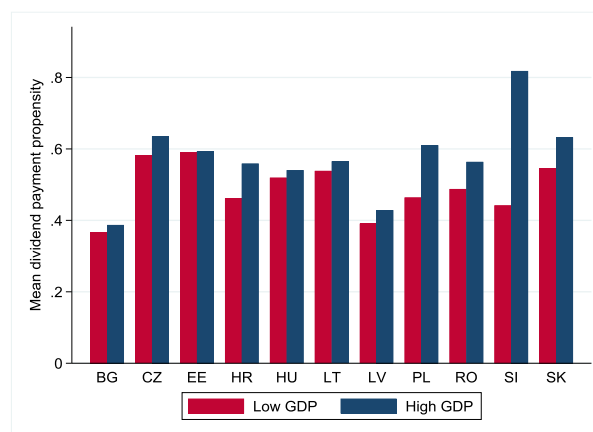


Figure 5. Dividend payment propensity and GDP growth above and below the median in Central and Eastern European banks.

Source: own elaboration.

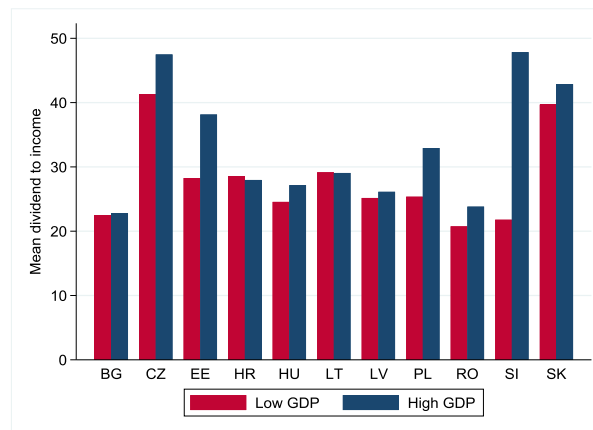


Figure 6. Dividend to income and GDP growth above and below the median in Central and Eastern European banks.

Source: own elaboration.

We find that there is heterogeneity between national banking sectors in terms of dividend payments under strong and weak economic conditions. In some countries, both the propensity to pay (Figure 5) and the level of dividends (Figure 6) are quite similar under low and high GDP growth. This is mostly visible for Bulgaria, Lithuania and Latvia. In other markets, such as the Czech Republic or Estonia, the propensity to pay is similar, but the average level of dividends differs under high and low growth. In Poland, Slovakia and especially Slovenia, the reaction of banks to GDP fluctuations is strongly visible in dividend payment propensity and levels. In periods of high growth, banks on these markets are much more likely to pay dividends and they are higher. During economic downturns, dividends decrease and banks are much less likely to pay them. Summing up, we observe that in Central and Eastern Europe there is heterogeneity in terms of bank dividends on the country level. In some markets, banks are more likely to pay dividends and dividends have a higher share in net income, than on other markets. At the same time, there are also country differences in dividend payments during high and low GDP growth, where some markets show relative stability of dividends, while in other countries dividends seem more dependent on the current economic environment.

4.3. Dividends and bank profitability and capital

Existing literature shows that bank dividends are frequently positive associated with bank profitability and capital levels. In this subsection, we analyse these links in our sample of Central and Eastern European banks. In the first step, we compare dividends of banks with profitability that is higher or lower than median profitability in a given country and year. Results for dividend payment propensity are shown in Figure 7, while dividend to income is presented in Figure 8.

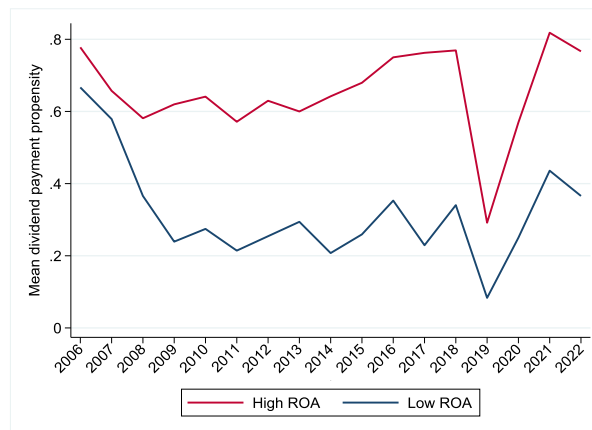


Figure 7. Dividend payment propensity for banks with high and low profitability in Central and Eastern Europe.

Source: own elaboration.



Figure 8. Dividend to income for banks with high and low profitability in Central and Eastern Europe.

Source: own elaboration.

We find that profitability is an important determinant of dividends, both in terms of propensity to pay (Figure 7) and the level of dividends (Figure 8). On average, banks with higher earnings are much more likely to pay dividends and their dividends are much higher than of banks with weak performance. Interestingly, differences in dividend payments between the two groups were relatively small before and in the beginning of the global financial crisis. Starting from 2009, banks with low and high profits start to strongly diverge in terms of dividend payments. Post financial crisis, the only period when the two groups converge in terms of dividends is 2019, when there is a sharp fall in dividends in both groups. The return to high dividends already seen in 2020 and continuing into 2021 is much quicker for highly performing banks, and the differences between the two groups again become more sizeable.

In the second step, we study bank dividends in the context of capital levels. In line with the procedure for bank profitability, we compare dividend payments of banks with equity that is higher or lower than the country median per year. We present results in Figure 9 for dividend payment propensity and Figure 10 for dividend to income.

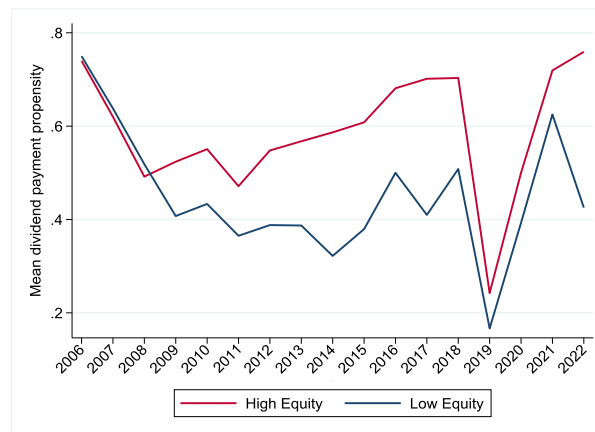


Figure 9. Dividend payment propensity for banks with high and low equity in Central and Eastern Europe.

Source: own elaboration.



Figure 10. Dividend to income for banks with high and low equity in Central and Eastern Europe.

Source: own elaboration.

The results depicted in Figure 9 and 10 indicate that the level of capitalisation matters for dividend payments in banks. On average, banks with more generous equity cushions are more likely to pay dividends (Figure 9) and the dividends are higher (Figure 10) than of banks with below-median capital. The two groups diverge mostly between 2009 and 2018. Starting from 2019, differences are not so sizeable, indicating that profitability may be a more meaningful indicator to dividend payments than equity in the post-pandemic era. At the same time, it possible that bank regulators and supervisors were more strict about required capital levels in the pandemic period and differences between banks in terms of capital were smaller than before. This may have led to banks no longer determining dividends on the basis of capital, but rather making dividends dependent on profitability.

5. Conclusions

In this paper, we study trends in dividend payments of Central and Eastern European banks over the period 2006 to 2022. We use a unique, hand-input database of dividends for both listed and unlisted banks in eleven countries. We find that there is visible heterogeneity in dividend payment propensity and dividend levels between various countries. Dividends are linked with GDP growth, with higher dividends paid in strong economic environment. At the same time, banks in various countries react differently to changes in the macroeconomic environment. In some countries, dividends paid under strong and weak growth do not differ strongly, proving a consistent and stable dividend policy. In other markets, dividends paid in economic upheavals are much more likely to be paid and much higher than in economic downturns. This potentially shows that some banks in Central and Eastern Europe do not follow patterns of large US banks, which continued to pay dividends during the global financial crisis (Acharya et al., 2022; Floyd et al., 2015).

Dividends of banks in Central and Eastern Europe are positively linked to bank profitability and the level of capital. Banks with strong earnings and large capital buffers are more likely to pay dividends and dividends are higher than of banks with worse performance. The differences between the two groups become especially visible after 2008 and disappear only shortly in 2019. Performance is observed to drive dividend payments more than equity levels. After the COVID-19 pandemic, we find a sharp increase in dividends, regardless of profitability or equity levels. This dividend boost is similar to the observed rebound of dividends in US banks after the global financial crisis (Floyd et al., 2015). This poses an important task for bank regulators and supervisors, which should assure that adequate capital requirements are in place, to avoid dividend over-payment in good times, which may endanger financial stability during more turbulent periods (Ashraf et al., 2016).

In existing literature on bank dividends, studies relating to Central and Eastern Europe are rare. Empirical work on dividends most frequently bases on banks in developed markets, often limiting the samples to listed banks. We observe that on average, banks in Central and Eastern Europe have a much lower dividend payment propensity than listed banks in recent cross-country samples (Gambacorta et al., 2023), euro-area banks (Belloni et al., 2023) or earlier US samples (Chronopoulos et al., 2023). In addition, dividend to income levels are lower than in Western European banks (Belloni et al., 2023; Lepetit et al., 2017). Hence, more research is necessary on bank dividends in Central and Eastern Europe, to understand mechanisms underlying dividend payment decisions made by banks in the region. Possible explanations for different dividend levels, in relation to Western European and US banks, may include the prevalence of majority shareholders in Central and Eastern European banks, differences in bank performance and distinct bank regulation and supervision, especially regarding dividend policy.

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