

## High earners in the European banking sector\*



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*This analysis offers a summary of the key findings from the latest report on High Earners published by the European Banking Authority (EBA) in 2022, and it compliments these findings with additional insights by including Bloomberg data from 2023. The EBA report shows that, Liechtenstein leads the European Economic Area (EEA) countries in terms of High Earners per million population, while Ireland tops the list for average remuneration at 2.4 million EUR in 2022. The ratio between variable vs fixed remuneration components shows significant variability across EEA countries (DNK: 44%; NL: 337%). The country with the highest share of non-male High Earners was Finland with 16.7%. Finally, we explore factors that influence the remuneration of the Highest Earners in European banks. With this goal in mind, we construct and test four hypotheses and find that: larger banks (more employees) and better market valuations (price-to-book ratio) correlate with higher remuneration, while profitability (return on equity) is not a significant explaining variable for the remuneration of the Highest Earners in European banks. We also find that the remuneration in banks with better risk management and/or higher risk aversion (lower non-performing loan ratio) is higher.*

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\*The views expressed are those of the authors only and do not necessarily represent those of the Oesterreichische Nationalbank (OeNB) or the Eurosystem. Tobias Gerstmayr was affiliated with the OeNB at the time of writing.

## Background and data basis

The following analysis provides an overview of the so-called "High Earners" in the European banking sector. The following two data sources were used for this analysis:

**The European Banking Authorities (EBA) "Report on High Earners":** the EBA publishes an annual overview of High Earners in the banking sector in the European Economic Area (EEA). High Earners are defined as persons who receive remuneration of more than 1 Mio. EUR in the corresponding calendar year. This includes both fixed and variable remuneration as well as other salary components. The major advantage of this data source is that not only board members but also employees are included – this is particularly relevant in investment banking, where the remuneration of (senior) employees often exceeds that of the CEO. At the same time, the EBA report has two disadvantages: On the one hand, there is a considerable time lag – the current report published in 2024, for example, refers to remuneration in 2022. Furthermore, the data is only available at the country level or at the business model level, but not at the individual bank level. In the most recent report, the EBA has introduced a new dimension by including the gender of High Earners in its data collection.

**Bloomberg database on governance and remuneration:** The second data source for this analysis is the extensive Bloomberg database. The main advantage of this data source is that information on remuneration can be retrieved at individual bank level, which enables a more granular analysis. In addition, the bank sample can be expanded and a comparison with non-EEA countries can be made. The data can also be retrieved for the most recent calendar year. The two main disadvantages of the data from Bloomberg are as follows: Firstly, the used variable only includes the single individual with the highest remuneration per bank i.e. the Highest Earners per bank. Furthermore, the data is limited to banks traded on stock exchanges.

A combination of these two data sources therefore seems particularly useful, as it provides a comprehensive and complete overview of the High Earners in the European banking sector.

## High Earners in the Banking Sector per Country

### Analysis of EBA Data from 2022

As in previous years, the EBA collected data on High Earners in the banking sector of the EEA for 2022. In total, 27 countries participated, varying widely in size and population. Across the EEA 2,342 High Earners were identified, with around half of all High Earners being employed in Germany (653) and France (519). The number of High Earners per million population<sup>1</sup> is depicted in *Figure 1*. Liechtenstein tops the list with 381.6 High Earners per million population, followed by Luxemburg (71.3), Ireland (10.9) and the Netherlands (10.3). The number of High Earners per million population is notably higher in the western than in the eastern parts of the EEA.

For the first time, EBA also collected the gender of the High Earners (male, female and neither female nor male). The percentage of non-male High Earners out of all High Earners is shown in *Figure 2*. The countries with the highest share of non-male High Earners are Finland with 16.7%, followed by France and Spain (both 10.6%). Across all countries in the EEA, out of a total of 2,342 High Earners, only 195 individuals do not identify as male, indicating a significant gender bias.

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<sup>1</sup>Here it should be noted that countries are normalized to 1 million people, thus the number of High Earners is extrapolated for small countries (Liechtenstein, Luxemburg, ...).

Figure 1: High Earner per million population

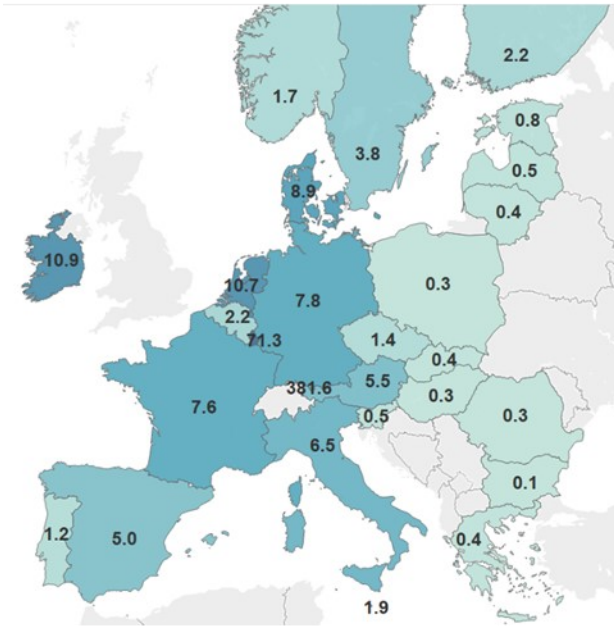
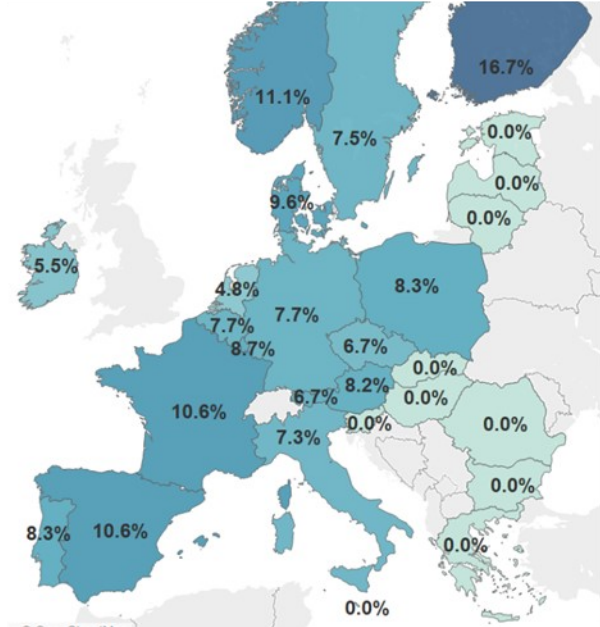
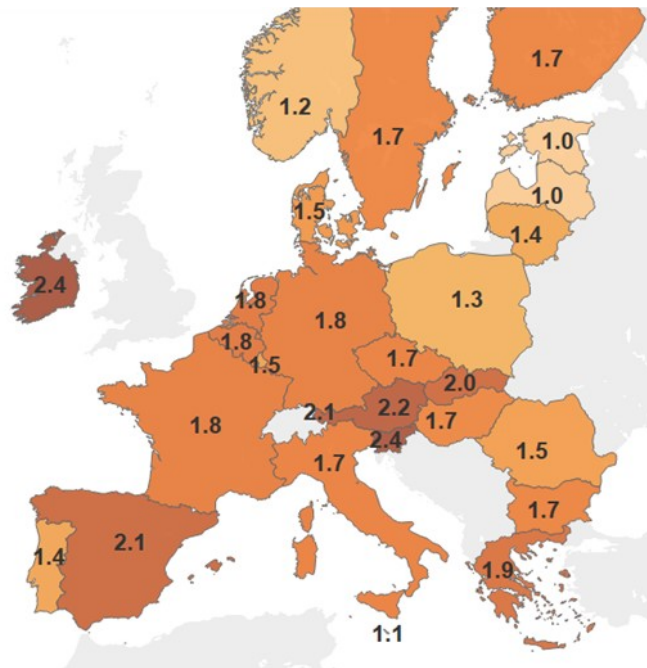


Figure 2: Percentage of non-male High Earners



The country with the highest average remuneration (fixed and variable components) in Mio. EUR. was Ireland which tops the list with an average remuneration of 2.4 Mio. EUR (see Figure 3), followed by Slovenia (2.4 Mio. EUR) which had only one High Earner in 2022. The country with third highest average remuneration was Austria (2.2 Mio. EUR), surpassing the EEA average of 1.8 Mio. EUR.

Figure 3: Average remuneration per High Earner in Mio. EUR



The remuneration structure of High Earners for Institutions and Investment Firms is depicted in *Table 1*. High Earners from Denmark had a variable vs. fixed ratio of 44%, which is the lowest rate among the displayed countries and significantly below the EEA average of 109%. The Netherlands had the highest variable vs. fixed ratio in the EEA (337%). Countries with a high variable vs. fixed ratio, also had a large share of High Earners employed in Investment Firms. The average variable vs. fixed ratio for High Earners in Investment Firms (489%) was higher than in Institutions (85%). Out of all 2,342 High Earners 325 were employed in Investment Firms.

Most of the High Earners in Institutions can be categorized into four broad subgroups<sup>2</sup>: Management Board<sup>3</sup> (32%), Investment Banking (37%), Retail Banking (9%) and Corporate Function (8%). Belgium and Germany had a particular high share of High Earners that are on the Management Board (BE: 76%, DE: 60%), while France and Sweden had a higher percentage of High Earners in Investment Banking (FR: 73%, SE: 63%). Further information on the share of High Earners in the most common subgroups can be seen in *Table 2*.

**Table 1: Remuneration Structure of High Earners in the EEA**

### Remuneration Structure of High Earners in Top 12 Countries for Institutions and Investment Firms

	Total Number of High Earner	Average Total Remuneration for all	Variable vs fixed remuneration for all	Number of High Earner in Investment Firms	Variable vs fixed remuneration
EEA	2.342	1.8	109%	325	489%
Germany	653	1.8	71%	44	413%
France	519	1.8	152%	52	418%
Italy	383	1.7	83%	24	150%
Spain	235	2.1	127%	24	249%
Netherlands	189	1.8	337%	115	1778%
Ireland	55	2.4	264%	37	338%
Denmark	52	1.5	44%	10	136%
Austria	49	2.2	71%	0	-
Luxemburg	46	1.5	83%	0	-
Sweden	40	1.7	63%	0	-
Belgium	26	1.8	123%	9	742%
Czech Republic	15	1.7	114%	4	1227%

Source: EBA.

<sup>2</sup> High Earner in Institutions were originally grouped into 8 subgroups by EBA: Management Board (MB) supervisory function, MB management function, Investment Banking, Retail Banking, Asset Management, Corporate functions, Independent control functions and all other. High Earners in Investment Firms (325 out of all 2.342 High Earner in the EEA) were grouped into 8 separate subgroups, not included here.

<sup>3</sup> Management Board refers to the subgroups MB supervisory function und MB management function.

**Table 2: Subgroup of High Earners in the EEA****Subgroups of High Earners in Institutions**

	High Earner in Institutions	... of which in management function	... of which in investment banking	... of which in retail banking	... of which in a corporate function
EEA	2,017	32%	37%	9%	8%
Germany	609	60%	19%	8%	6%
France	467	9%	73%	4%	4%
Italy	359	7%	34%	16%	10%
Spain	211	13%	44%	12%	23%
Netherlands	74	35%	34%	8%	15%
Ireland	18	44%	22%	11%	0%
Denmark	42	55%	21%	5%	10%
Austria	49	63%	8%	10%	10%
Luxemburg	46	61%	2%	13%	2%
Sweden	40	18%	63%	3%	8%
Belgium	17	76%	12%	12%	0%
Czech Republic	11	64%	9%	9%	9%

Source: EBA.

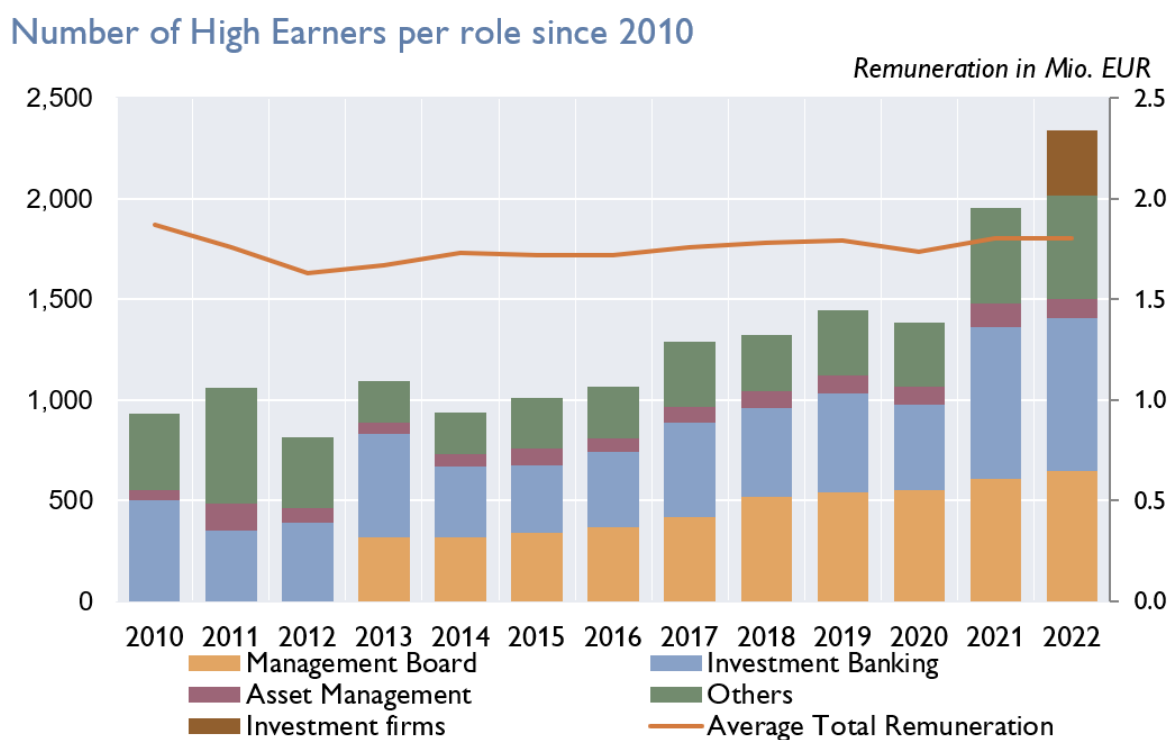
**Historic development of High Earners since 2010**

Four major trends can be observed in the development of High Earners in the EEA between 2010 and 2022. We remove all High Earners from the UK, to ensure comparability over all years.

- 1) The number of High Earners in the EEA between 2010 and 2022 is depicted in *Figure 4* and shows a continuous increase. At the end of 2022 there were more than twice as many High Earners compared to 2010 in the observed countries. (2010: 930, 2022: 2342).<sup>4</sup>
- 2) The average total remuneration has increased from 2012 to 2022 by 10% but has not reached the level of 2010.
- 3) When comparing the number of High Earners of each subgroup between 2010 and 2022 a significant increase can be observed in each of the major subgroups. The highest absolute growth occurred in the subgroup Investment Banking seeing an increase of 253 High Earners.
- 4) The variable vs. fixed ratio has slightly increased between the year 2010 and 2022 (106%, 109%), however has generally shown a decreasing trend until 2020 (86%). After 2020 the ratio increased in 2021 and 2022, likely reflecting a booming stock market.

<sup>4</sup> Before the exclusion of the UK due to Brexit, 71% of EEA High Earners worked in the UK.

Figure 4: Number of High Earners and average total remuneration in Mio. EUR between 2010 and 2022 without UK



## High Earners in EEA Banks

### Analysis of Bloomberg Data 2023

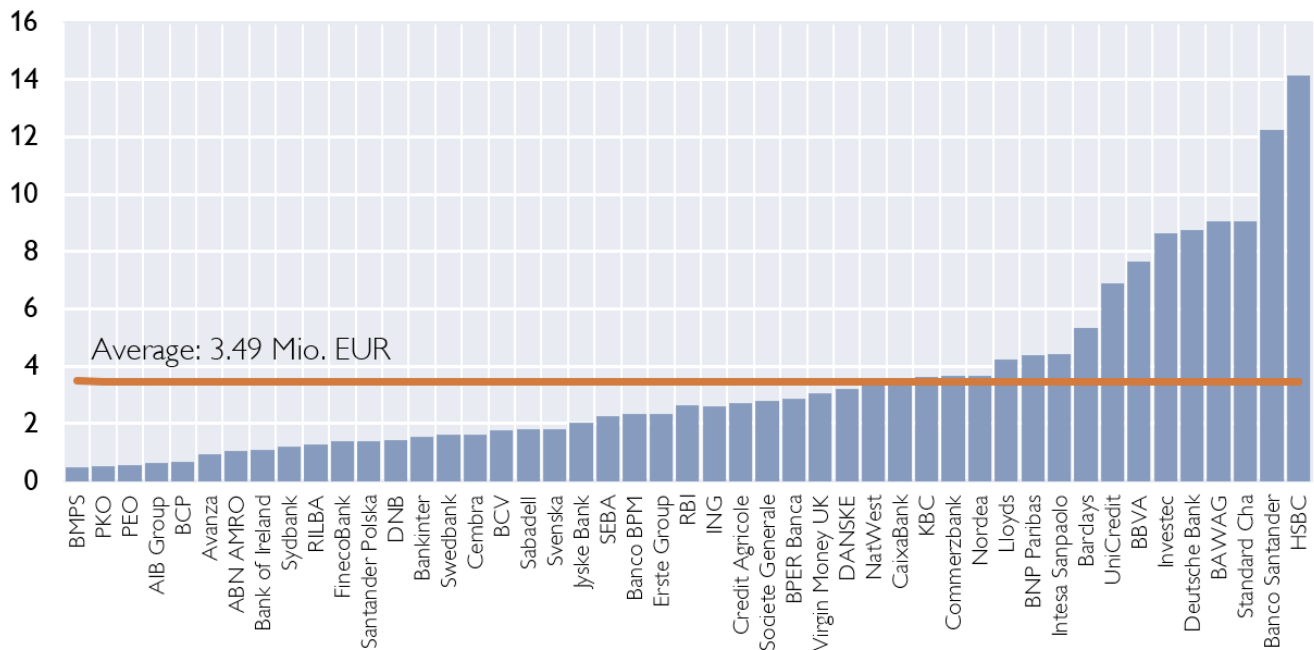
Bloomberg's 2023 data on remuneration of the Highest Earner in a STOXX Europe 600 Banks<sup>5</sup> shows significant disparities in remunerations across different European banks. Figure 5 depicts the single highest remuneration in each bank in Mio. EUR including both fixed and variable components in the year 2023. The average Highest Earner remuneration for the included European banks was 3.49 Mio. EUR in 2023. The individual with the highest remuneration in 2023 was Noel Quinn the CEO of HSBC with 14 Mio. EUR. This was a higher remuneration than usual as he was paid out a significant three-year bonus in 2023. Other Highest Earners were Ana Botin (Executive Chair of Banco Santander – 12 Mio. EUR), Bill Winter (CEO of Standard Chartered – 9 Mio. EUR), Anas Abuzaakouk (CEO of BAWAG - 9 Mio. EUR) and Christian Sewing (CEO of Deutsche Bank – 8.7 Mio. EUR).

<sup>5</sup>The STOXX Europe 600 Banks sample consists of a slightly changing group of European banks. We decided to not account for changes in the Index in the observed time period (2010-2023). Furthermore, we made the decision to include Raiffeisen Bank International (RBI), even though it was not included in the STOXX Europe 600 Banks index in 2023. In total we included all 46 STOXX Europe 600 Banks at YE 2023 plus RBI.

Figure 5: Highest remuneration (total fixed and variable components) for each European bank in Mio. EUR in 2023

### Highest remuneration at STOXX Europe 600 banks

in Mio. EUR, 2023



Source: Bloomberg.

### Why do some Highest Earners earn more than others?

In this section, we will explore the factors that influence the remuneration of the Highest Earners in European banks. With this goal in mind, we construct and test four hypotheses. The selection of variables is guided by existing literature on High Earner compensation. The variables we focus on are number of employees (reflecting bank size), price-to-book ratio (reflecting market valuation), return on equity (reflecting profitability) and non-performing loans ratio (reflecting risk management and/or risk aversion).

Most research on remuneration practices in banks, concentrates on CEO remuneration. However, our analysis focuses on the single individual with the highest remuneration in a bank. While the data for CEO remuneration was also available in Bloomberg, we opted for the highest remuneration datapoint instead due to comparability issues (multiple CEOs in some years, ...). Notably, we found that, in most cases, the highest remuneration was equivalent to the CEO's remuneration in the banks we studied. Therefore, we deem it is reasonable to compare our findings with research that focused solely on CEO remuneration.

## ***Construction of Hypotheses***

Below the hypotheses are stated in their alternative form.

### **Hypothesis 1 = Larger banks remunerate their Highest Earner better**

According to the literature, the size of the bank is relevant when explaining the remuneration practices of a company (Tosi et al., 2000) or a bank (Shiyyab et al., 2013). Thus, we anticipate a significant positive relationship between the logarithm of the Highest Earner's remuneration and bank size, which we measure by the logarithm of total employees.

### **Hypothesis 2 = Banks with higher market valuation (measured by the price-to-book Ratio) remunerate their Highest Earner better**

We assume that differences in price-to-book ratio ratios indicate varying shareholder trust in individual banks. Higher price-to-book ratios should correspond with higher remuneration for the Highest Earners, as Chung & Pruitt (1996) find market valuations and executive compensation to be jointly determined.

### **Hypothesis 3 = The profitability of a bank is positively correlated with the remuneration of its Highest Earner**

Pathan & Murphy (1990) and Tosi et al. (2000) have found a positive relationship between financial performance and CEO compensation in publicly traded firms, however other research like Davidsson & Peterzén (2019), which focused exclusively on retail banks, was unable to find any significant relationship between CEO compensation and financial parameters.

### **Hypothesis 4 = Banks with better risk management and/or higher risk aversion tend to provide higher remuneration for their Highest Earner**

Since the great financial crisis significant attention has been placed on the remuneration structure of bank CEOs, specifically how much variable pay a CEO receives and how that affects risk levels. Cerasi et al. (2017) find that variable remuneration correlates positively with returns and negatively with risk. Similarly, Pathan et al. (2022) found that larger pay gaps between CEO and other executives are associated with reduced risk levels in a bank's portfolio. They argue that when more power is concentrated in one individual, the pressure to achieve short-term results decreases. We test these findings by taking the non-performing loans (NPL) ratios of the included banks as a proxy for risk management.

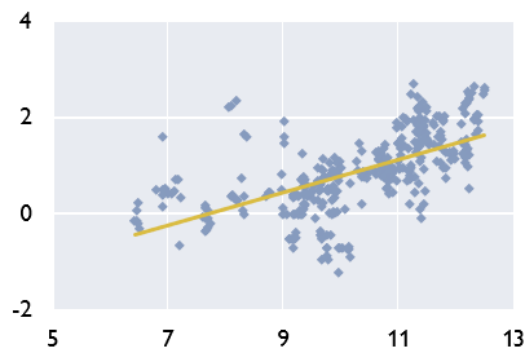


**Figure 6: Selected Correlation for the years 2010-2023 Bank Sample STOXX Europe 600 Banks for highest remuneration per Bank**

### Selected Correlation with Highest Remuneration in a Bank (ln)

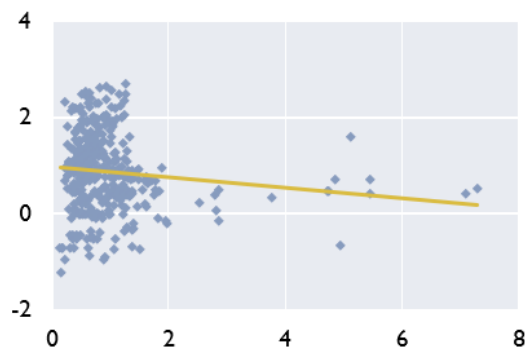
**a) Number of Employees (ln)**

$R^2 = 0.33$



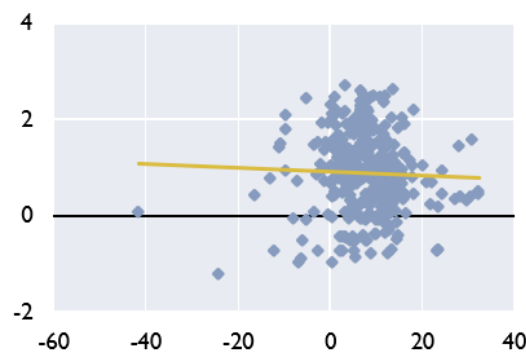
**b) Price-to-Book Ratio**

$R^2 = 0.06$



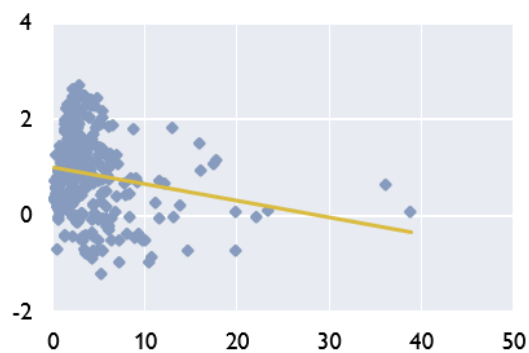
**c) Return on Equity (RoE)**

$R^2 = 0.03$



**d) Non-Performing Loans (NPL)**

$R^2 = 0.04$



Source: Bloomberg.

### Relationships between the selected variables and remuneration

Next, we determine which variables can describe remuneration practices in a STOXX Europe 600 Bank best by constructing univariate regressions between the selected variables and the remuneration of the Highest Earner in a bank (see *Figure 6*). We see significant correlation between the natural logarithm of remuneration and the natural logarithm of the number of employees. Of all variables included in this analysis, the number of employees shows the highest correlation with the remuneration of the Highest Earner with an  $R^2$  of 0.33. This indicates that approximately 33% of the variance in remuneration can be explained by the number of employees in a bank, suggesting a clear relationship between a bank's workforce size and the remuneration of the Highest Earner.

A much weaker correlation exists between remuneration and the price-to-book ratio with an  $R^2$  of only 0.06. The Italian online bank Fineco Bank was responsible for most of the outliers on the right-side of *Figure 6b*, as it had a particular high price-to-book ratio between 2010 and 2023. Similarly, to the price-to-book ratio, RoE and the NPL ratios show only minimal correlation with an  $R^2$  of 0.03 and 0.04 respectively. Outliers with NPL ratios above 20% were the Banks Monte dei Paschi and BPER Banco, both banks have struggled with high NPL ratios after the eurozone crisis (see *Figure 6d*). As evidenced by the low correlations in *Figure 6*, we are unable to capture all dimensions that explain the remuneration of the Highest Earner in a bank with the selected variables.

## Insights from Multivariate Regression: Validating the four Hypotheses

It is evident that no single variable can adequately explain the complexities of Highest Earner remuneration in the banking sector alone. The use of a multivariate time fixed effects regression model allows us to estimate the relationships between multiple variables simultaneously over a long period of time, providing a more comprehensive understanding. Also, its results help us evaluate the validity of the four hypotheses constructed above. The regression results, detailed in *Table 3* of the appendix, provide several key insights:

- 1) **Bank Size:** The positive relationship between number of employees and remuneration confirms that larger banks tend to pay higher compensation to their Highest Earners. This supports *Hypothesis 1*, as bank size significantly influences executive pay. This variable proved to be most crucial when explain the remuneration of the Highest Earner in a European bank.
- 2) **Market Valuation:** The basic correlation in *Figure 6* presents a negative relationship between the price-to-book ratio and remuneration. This, however, differs from the results of the multivariate regression (see *Table 3*). This discrepancy highlights the difference between correlations and multivariate regressions which can control for other factors. When including the size of a bank, the sign of price-to-book ratio switches from negative to positive. Thus, the result of the multivariate regression aligns with *Hypothesis 2*: Banks with higher market valuations reward their Highest Earner better.
- 3) **Profitability:** Despite its importance in assessing a bank's overall performance, our analysis shows that RoE is not a significant factor in explaining the remuneration of the Highest Earner, which is in line with Davidsson & Peterzén (2019). The Bayesian Information Criterion (BIC) in fact decreases when including RoE as a variable after forward selecting the other variables first. This suggests that RoE should be excluded from the multivariate model, thus rejecting *Hypothesis 3*.
- 4) **Risk Management and/or Risk Aversion:** A negative correlation between the NPL ratio and remuneration supports *Hypothesis 4*. This emphasizes the importance of asset quality, as a proxy for risk management and/or risk aversion, in determining executive compensation. Banks with deteriorating assets remunerate their Highest Earner less.

## Summary and conclusions

- This analysis relies on **two data sources**: (1) the **EBA report on High Earners**, i.e. on persons employed in the banking sector of the European Economic Area (EEA) who earn **1 Mio. EUR** or more in a given calendar year; (2) **Bloomberg's Environmental, Social & Governance (ESG) dataset**, which provides, inter alia, data on the remuneration paid to the Highest Earner i.e. the single individual with the highest compensation among the **STOXX Europe 600 banks**.
- **EBA data** reveals that High Earners (yearly remuneration > 1 Mio. EUR) have **increased in numbers** throughout the entire EEA (excl. UK)<sup>6</sup> over time. When we **measure High Earners per one million inhabitants**, however, **Liechtenstein** clearly **heads the list** in 2022. With **2.4 Mio. EUR**, Ireland is in the lead with respect to **average High Earner remuneration**, followed by Slovenia and Austria. Since 2012, **average remuneration** of High Earners employed in the EEA **has risen** by 10%. In the most recent report, the EBA has introduced a new dimension by including the **gender of High Earners** in its data collection. The country with the highest share of non-male High Earners is Finland with 16.7% (EEA median of 6.7%).

<sup>6</sup>After Brexit, the UK stopped reporting data on their respective High Earners to EBA. To ensure comparability we decided to remove the UK for all years. In this analysis when referring to EEA, we are excluding UK.

- Moreover, EBA data point to **heterogeneous remuneration patterns**, with variable and fixed remuneration components varying across EEA countries. As a case in point, the variable remuneration ratio was 44% in Denmark in comparison to 337% in the Netherlands (variable remuneration in % of fixed remuneration) for Institutions and Investment Firms. The EEA average for High Earners in Investment Firms (489%) was higher than in Institutions (85%). Breaking down the data on High Earners into **business areas and functions** also yields interesting findings. In France, for instance, the lion's share of Institutions High Earners work in **investment banking (73%)**, while the majority of High Earners in Germany hold **management board functions (60%)**.
- An analysis of the **data drawn from Bloomberg** shows that **the remuneration of the Highest Earner** varies widely from one STOXX Europe 600 bank to another. In 2023, the Highest Earners in the European banking sector are Noel Quinn (CEO of HSBC) with a total remuneration of 14 Mio. EUR per year, Ana Botin (Executive chair of Santander) with 12 Mio. EUR, Bill Winter (CEO of Standard Chartered) with 9 Mio. EUR and Anas Abuzaakouk (CEO of BAWAG) with 9 Mio. EUR.
- Finally, we explore factors that influence the remuneration of the Highest Earners in European banks. With this goal in mind, we construct and test four hypotheses. We find that **larger banks** (number of employees) **tend to pay higher remuneration, better market valuations** (price-to-book ratio) are related with **higher pay** while **profitability** (return on equity) is **not relevant** when explaining the remunerations of the Highest Earners. We also find that the remuneration in banks with **better risk management and/or higher risk aversion** (lower non-performing loan ratio) **is higher**. ■

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## Appendix

Table 3: Regression table for highest remuneration in a Stoxx Europe 600 Banks between 2010-2023<sup>7</sup>

	Dependent variable:	
	log(Highest)	
	(1)	(2)
log(Employees)	0.437*** (0.024)	0.440*** (0.025)
NPL	-0.035*** (0.006)	-0.029*** (0.006)
PB	0.175*** (0.041)	0.146*** (0.043)
RoE		0.007* (0.004)
Observations	523	522
R <sup>2</sup>	0.440	0.444
Adjusted R <sup>2</sup>	0.423	0.425
BIC	987.6	989.3
F Statistic	132.654*** (df = 3; 506)	100.617*** (df = 4; 504)
Note:	*p<0.1; **p<0.05; ***p<0.01	

<sup>7</sup>The table should be understood as follows. The dependent variable is the total remuneration of Highest Earner in a Bank. The natural logarithm is applied to this variable to calculate the relationships to the independent variables, among others, in terms of elasticities and to bring them to a more consistent level with the other variables. This logarithmic transformation is also applied to the Number of Employees. The results are to be interpreted *ceteris paribus* (meaning under the condition that all other independent variables are held constant) and are read as follows: (1) Number of Employees: If the number of employees increases by 1%, then the Compensation increases by 0.43%. (2) Price-to-book Ratio (P/B Ratio): If the P/B ratio increases by 1 percentage point, then the Compensation increases by 0.175%. (3) non-performing loans: If the NPL Ratio increases by 1 percentage point then the Remuneration decreases by 0.035%. (4) Return on Equity (RoE): If the RoE increases by 1 percentage point, then the Compensation increases by 0.007%. The number in parentheses below each parameter value is the corresponding standard error. The ratio of the standard error to the parameter value determines the significance (marked with asterisks "\*") at the respective confidence intervals "<1%", "<5%", or "<10%". R<sup>2</sup> is a measure of the explanatory power of the model (ranging from 0 to 1; 1 would mean the model explains 100% of the variation in the dependent variable). Adjusted R<sup>2</sup> takes into account the number of variables by "penalizing" a model with many variables, as adding more variables typically increases the explanatory power without necessarily providing a decisive improvement. Similarly, the Bayesian Information Criterion (BIC) also penalizes model size to avoid overfitting.

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