An Assessment of the Europeans' Bank Bailout Policies since the Global Financial Crisis and a Proposal for Reforms

A Comparison with the US Experience

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Abstract

Europe still has a lot to learn from the events of the Global Financial Crisis (GFC) of 2008 as it continues with reforms of its bank resolution ecosystem. Through a comparison of the bailout mechanisms used in Europe and the United States during the GFC, we show that the US bank bailout approach appears to have been much more successful than the European one. The separation of governance functions from management functions and the nature of voting rights have incentivised the US Treasury to actively intervene in the distressed banks by imposing critical changes, for example a change of CEO or affecting the board compensation. In addition, such US Treasury behaviour has also disciplined other banks to implement the necessary restructuring changes to avoid government intervention. In turn,

the European bailout approach has supported government passiveness in the governance functions and its greater involvement in bank business. As a result, we have noticed a significant increase in board compensation at nationalised banks, and no significant restructuring changes. Our findings call for bailout mechanisms incentivising the resolution authority playing an active role in the governance functions at distressed banks without significant involvement in bank business. We also opt for time-constrained intervention.

Introduction

The approach towards and extent of government interventions in respect of distressed banks have been debated for many years. Government interventions can create moral hazard leading to wrong incentives for banks to engage in risky lending (see, for example, Demirgüç-Kunt and Kane, 2002; Demirgüç-Kunt, Kane, and Laeven, 2008). Government interventions can also provide banks with perverse lending incentives on which they exert forbearance, which can result in misallocation of capital to 'zombie' firms (see Acharya et al., 2021; Goodhart, Wang, and Tsomocos, 2020). Moreover, they come with a high fiscal bill and hence are often disliked by the public, particularly in Europe since the Global Financial Crisis (GFC) of 2008. At that time, the costs of recapitalisation of European banks were much higher than in the United States.

However, government interventions remain inevitable in the event of an extreme systemic crisis and/or in cases of distressed banks that are 'too big to fail'. Thus, the debate continues as to what scheme of bank bailouts should be adopted so that the fiscal injection achieves the highest productivity in a short period of time. Government participation in a bank bailout may potentially lead to positive results. For instance, if restricted, it could initiate the restructuring of distressed banks, which otherwise might not have happened. It can also play an important role in the governance process by having the required power to influence management changes. In addition, under certain circumstances, it may also have a positive effect on market discipline by limiting moral hazard behaviour often associated with bank bailouts.

Other stakeholders such as debtholders might not have the right incentive to do so. Since the debtholders have a priority on claims over other shareholders, the incentives to sufficiently monitor and incorporate necessary changes at distressed banks might not matter for them (Landier and Ueda, 2009). Moreover, since the debtholders do not benefit from any bank restructuring programmes, the bank shareholders will not have incentives to implement any restructuring changes at such banks, as found in Tanaka and Hoggarth (2006).

At the same time, there is a high risk that government misuse of public money and its lack of experience might exacerbate mismanagement and risk-taking activities (see Tahoun and van Lent, 2010; Duchin and Sosyura, 2014). Thus, it is crucial that the design of the bank bailout reduces any risk of governmental misuse and provides the appropriate incentives for governments to facilitate the necessary changes at distressed banks.

In the context of the Eurozone countries, an important debate arose on how to create a unified model of banking resolution so that the banking sector recovery could be homogeneous across member countries. Such unified banking resolution model could help to reduce the negative transmission effects across countries (Allen and Gu, 2018) as well as to facilitate more equal growth within the European region.

In this article we argue that the bailout approach used in the US has been more effective than that used in Europe. The US bailouts provided the correct incentives for the US Treasury to actively participate in the governance process and monitor the rescued banks. In addition, the cumulative dividends and restricted involvement of the government successfully increased banks returns.[68] Importantly, the nature of Treasury ownership has incentivised the US Treasury to play an active role in corporate governance while at the same time preventing it from participating in the daily management of the bank. Moreover, the US bailout process left some discretion to bank managers in running bank restructuring activities under the governmental 'sanction' to fire the CEO or to make personnel changes in the management. This kind of 'sanction' has created discipline among the distressed banks to improve their performance due to the possibility of governmental changes in the corporate structure (Muecke et al., 2021).

In contrast, European governments intervened as ordinary shareholders with majority voting rights. This created incentives for them to misuse their power in bank management. Moreover, it precipitated a conflict of interest between governance and management functions within the rescued bank. In the academic literature, government as an ordinary shareholder has been evidenced as an untrustful and inexperienced shareholder, mainly aimed at realising its own political incentives (Caballero, Hoshi, and Kashyap, 2008).

We analyse the effect of different bailout approaches on the governance structure of the bailed-out banks. More specifically, we investigate how different bailout schemes and their mechanisms have incentivised governments to implement the necessary changes in the distressed banks. We use bank-level data on multiple governance proxies such as CEO change, changes in management board, compensation levels of the CEO and other executives, and compensation schemes in the management board. We assess how those variables change depending on the bailout mechanisms for a sample of American and European banks between 2007 and 2018.

We identify four weaknesses of the European bailout approach during the Global Financial Crisis of 2008:

1. Heterogeneous fiscal approaches used in the European countries resulted in wide divergence in the levels of bank recapitalisation among the member states. This left many banks severely undercapitalised and encouraged so-called zombie lending.
2. Ordinary stockholding has created a conflict of interest between the government role in bank governance and management, which caused forbearance in bank efforts on re-structuring.
3. The lack of a unified European approach towards the resolution of distressed banks left many banks in government hands. In countries with poor government performance, many banks are still operating under adverse conditions.
4. Discretion given to banks to run the restructuring process without any monitoring has resulted in the forbearance of restructuring.

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Different bailout approaches: American versus European

There are several fundamental differences between the bailout approach used in the United States and the one used in European countries. The bank bailouts in the US occurred mostly through the Troubled Asset Relief Program (TARP). It was established in October 2008 when Congress passed the Emergency Economic Stabilization Act (EESA). Within the TARP framework, the Treasury launched several equity injection programmes. In total, the US Treasury invested around $205 billion into 707 financial institutions, including Bank of America (BoA), Citigroup, JP Morgan, Wells Fargo, Goldman Sachs, and Morgan Stanley. It is important to note that the initial rationale under TARP was to purchase toxic assets from the troubled banks. However, TARP was eventually transferred into a programme of investing directly into the troubled banks (Sorkin, 2009).

Importantly, the US Treasury often invested either in the form of preferred stock with warrants, which did not involve voting power except in specific situations, or decided to keep the voting rights but with some restrictions. For instance, the Treasury could not interfere in the day-to-day management decisions in the bailed-out banks, and it was expected to dispose of its investment at the earliest possible time. In addition, it could exercise its voting rights as a common shareholder only in respect of core shareholder matters, such as board membership, amendments to corporate charters or bylaws, mergers, liquidations, substantial asset sales, and significant common stock issuances (see Yang, 2019). In addition, the vast majority of Capital Purchase Program (CPP) shares were preferred shares (93 per cent of banks selected this option) involving cumulative dividend payments (87 per cent of those banks that selected the preferred shares option). In addition to dividend payments, the US Treasury included additional covenant related to the appointment of directors. If the bank misses five quarterly dividend payments to preferred shareholders, then the Treasury could ask for permission to send a (non-voting) observer to board meetings. However, CPP institutions had the option to reject Treasury observers, which they did in several cases. If the institution missed six quarterly dividend payments, the Treasury had the right to appoint up to two board members. Finally, any bank that missed a dividend payment was not allowed to distribute dividends to common shareholders until all the missed preferred dividend payments were fulfilled. In a similar vein, the right of the Treasury to appoint board members could be removed only after all missed dividend payments had been realised (Muecke et al., 2021).

There were three models of bailouts that the US Treasury applied during the GFC:

- The first model was pursued in the case of BoA, where the Treasury held a low non-voting position via preferred stock with warrants. The Treasury only held 0.04 per cent of BoA's total outstanding shares without voting rights (Barnes, 2010). Even with exercising the warrants, the Treasury could have held only 5.2 per cent of BoA's shares.
- The second model assumed the minority though major shareholding ownership. Such a model has been pursued by Citigroup, where Treasury

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held 34 per cent of Citigroup's outstanding common stocks. The Treasury, however, reduced its voting power to the same proportions as other common stockholders except in major corporate matters.
- AIG was the only institution where the government had majority ownership and could exercise its voting right. It managed its shares via a special trust vehicle. Instead of holding them, it established the AIG Credit Facility Trust to hold AIG shares for the sole benefit of the Federal Reserve Bank of New York (FRBNY).[69] The purpose was to prevent potential conflicts between the government's role as a regulator and as an investor. Although the government could not influence the voting rights vested by the stocks, it decided to use its right to appoint two directors to the board of AIG. The Trust then left the daily management of AIG to its management without the interference of the Treasury (Kahan and Rock, 2011).

Nearly all funds for recapitalisation provided under TARP were repaid as early as 2013. As of 31 December 2018, the Treasury had collected $226.8 billion in proceeds as opposed to the $205 billion original investment and retained holdings in only three banks, as opposed to the 707 in which it invested (Yang, 2019).

The bank bailouts in Europe only partially resembled those in the US. Although in the initial stages of the GFC European governments were taking only minority stakes in banks, the need for recapitalisations combined with limited interest from the private sector to support the distressed banks led European governments to step in and take the majority share in many banks. The cost of the bailout programmes was much higher in Europe than it was the case in the US, particularly in Germany, Ireland, Spain, and the United Kingdom.

The European governments initially sought to follow the American approach to bailouts by playing a more passive role in nationalised banks. Therefore, many capital injections occurred through preferred stocks or hybrid instruments. With the deterioration of the situation in the European banking sector, however, the European Commission gave a 'green light' for nationalisation of the distressed banks to prevent the collapse of key financial institutions (European Commission, 2009). Following this announcement, the European governments were eager to step into the distressed banks. The greater the problems of banks were, the more frequently the governments decided to exercise their power by either acquiring the common stock ownership with voting rights or converting their hybrid instruments into the common stocks.

As a result, many European countries ended up with nationalised banks, where governments had the controlling stakes with significant voting power. Noticeable examples include the following:

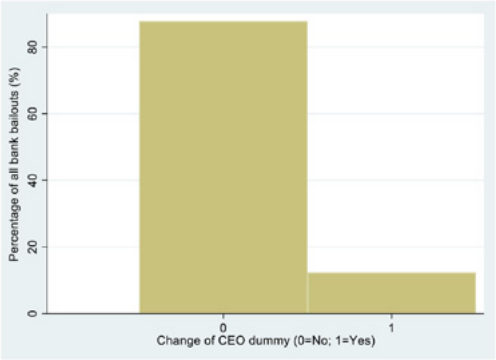
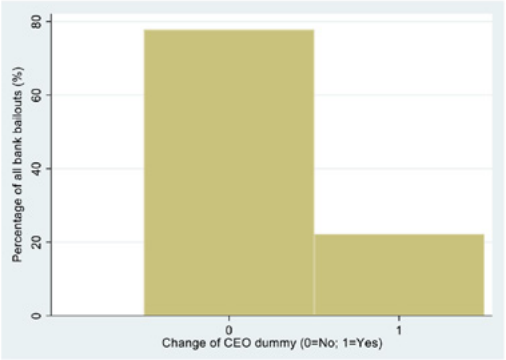
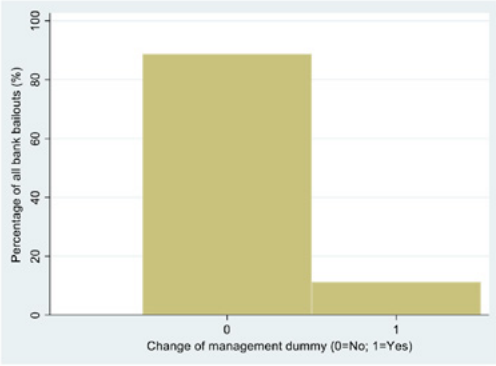
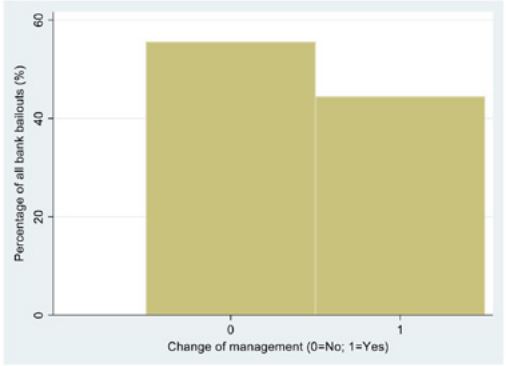
- In Ireland, the government initially injected capital to the Allied Irish Bank (AIB) in ordinary non-voting shares, which after the conversion into ordinary stocks and additional injections reached 92.8 per cent government ownership. However, the Anglo Irish Bank (Anglo) was nationalised on 15 January 2009 and recapitalised later in 2009 with €4 billion in ordinary stock (Igan et al., 2019).
- In Cyprus, the government recapitalised Cyprus Popular Bank as well as Cooperative Central Bank by taking its ordinary stakes to 84 per cent and 9 per cent, respectively.
- In the UK, the Bank of England and the Financial Services Authority (FSA) decided to inject £500 billion ($750 billion) into the country's eight largest banks and building societies. In 2008, the government invested £107.6 billion to acquire a controlling equity stake (84 per cent but only 68 per cent of the voting rights) in Royal Bank of Scotland (RBS) and a 43 per cent stake in Lloyds Banking Group (Lloyds). In 2010, it acquired the whole of Northern Rock and Bradford & Bingley (NAO, 2015).
- Germany nationalised its Hypo Real Estate Holding (HRE) through SoFFin (Sonderfonds Finanzmarktstabilisierung, or the Special Financial Market Stabilisation Fund),[70] which owned 90 per cent in 2009 via capital injections.

Empirical comparison of the American and European approaches to banking bailouts

Side-by-side assessment of the bailout approaches in the US versus Europe displayed several weaknesses of the European approach. This could help to explain the deficient recovery of the banking sectors in Europe and consequently could be a contributing factor to explain the slower overall economic growth on the European continent compared with the US.

Firstly, the problem with the European banks' bailout was that decisions and money transfers into the distressed banks were left in the hands of national governments, subject to the approval of the European Commission, and were dependent on the fiscal situation of the European countries. Many undercapitalised banks did not receive sufficient recapitalisation because of the fiscal constraints of individual countries (see Acharya et al., 2021). This left many undercapitalised banks in

Figure 1 Changes occurring in the management structure at the bailed-out banks in

	European banks	US banks
Change of CEO		
Change of Management		

Source: Authors (2022)

distress and therefore encouraged 'zombie lending'. Moreover, it has exacerbated disparities in the recovery of the banking sectors across the European countries (e.g., Andrews and Petroulakis, 2019).

Secondly, there has been no unified European policy towards the bank resolution process. European bank bailouts occurred at the national level, but European countries differ in terms of bankruptcy codes, power of resolution authorities, and more importantly the quality of the government. This institutional infrastructure has differentiated the restructuring path across the member states of the EU. This problem intensified as the European bailout approach assumed ordinary government participation with major voting rights. Figure 1 shows the differences between the US and Europe in terms of role of government in facilitating restructuring changes at the bailed-out banks.

As can be observed, government participation has not facilitated changes in the European banks to the same extent as in the US. Nearly 20 per cent of bailed-out banks in the US have experienced CEO change, while in Europe this ratio is less than 10 per cent. Similarly, government intervention has caused management changes in more than 40 per cent of the US banks whereas this rate was only 20 per cent in Europe. These data point towards a passive role of government in the corporate governance of bailed-out banks compared with the US, where the government has responded more often.

The passive role of government in the governance of bailed-out banks can be also empirically supported. Table 1 summarises the regression results on the assessment of the impact of government participation on CEO change. The voting rights variable indicates a statistical positive and highly significant effect in the US, while in the Europe sample the effect is negative and even not statistically significant. This shows that the nature of the voting rights as well as the market discipline might matter for how government facilitates its governance role. Our regression results support our hypothesis on the

Table 1 The effect of bailout mechanisms on CEO change in European and US banks

Variables	(1) CEO Change in Europe	(2) CEO Change in Europe	(3) CEO Change in US	(4) CEO Change in US
Duration	-0.0735*** (0.0200)		0.0448*** (0.00593)	
L1.Voting Rights		-0.117 (0.123)		0.335*** (0.00209)
Constant	1.937*** (0.279)	1.299*** (0.136)	0.384 (0.398)	-0.00249 (0.00317)
Observations	138	316	36	369
R-squared	0.559	0.675	0.595	0.342
Bank FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Clustered SE	YES	YES	YES	YES

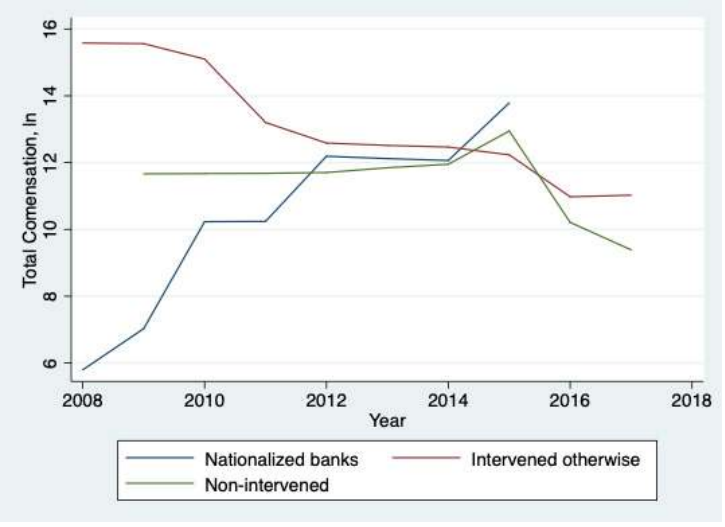
Note: *The sample covers bailed-out banks as well as their non-bailed-out peers in specific countries. The sample period covers the years between 2007 and 2018.
Source: Authors' calculations (2022)

passiveness of the European governments in facilitating management changes at distressed institutions, and consequently they prove their weak role in bank governance. Interestingly, the results show that the longer the duration of the US government at the distressed banks, the more positive changes have occurred. In contrast, the effect is negative in the case of the European banks, where extended government participation reduced the number of changes in the bailed-out banks. Those results indicate that these differences might be a result of additional covenants in the bailout process and consequent expectations regarding governmental role in the governance process.

We can especially notice in Figure 2 the conflicting role of European governments. The institutions with major government ownership have experienced an increase in compensation in the consequent years after the government intervention, while in other banks the compensation level has either decreased (in the case of other bailed-out banks) or stayed stable (in the case of non-bailed-out banks).

We also prove our previous findings on the passiveness of European governments and their potential conflicting role at the bailed-out banks compared with the US using bank compensation data (see detailed regression results in Annex 2). Our regression results also indicate a differential role played by government in the governed institutions in different countries. In general, our

Figure 2 Development of compensation across different European banks



Notes: Bank groups include banks controlled by government (nationalised banks) versus other bailed-out banks including minor government participation as well as their non-bailed-out periods. We account for government participation at a bailed-out bank for a maximum of four years.

Source: Authors (2022)

Photo by Christian Lue on Unsplash

empirical results in Table A1 covering US and European bank compensation data document a positive role of government governance over the distressed banks over the period 2008–2018. In other words, the compensation level has decreased at banks governed by government. However, when the US banks are excluded the regression results change.[71] Interestingly, we notice a positive trend in the compensation level at the European bailed-out banks. This confirms the observations from Figure 2 that European governments did not actively supervise the distressed banks, potentially even using their power to create benefits for their representatives. This could also explain the increasing trend in the compensation level at the bailed-out banks.

Europe should create a unified resolution system, which would allow for a homogeneous response across the member states of the EU during a banking crisis.

Finally, when we control for individual country characteristics, the government effect disappears (Table A2). The effect only remains for total compensation. Almost all country 'dummy variables' are statistically significant, and some coefficients exert different negative signs, which is welcomed. They indicate that those countries' policies could have a positive impact on compensation change at distressed banks in those countries. However, as we could expect, the country dummy does not exert any effect in Spain, while in Iceland we notice a positive and statistically significant effect on compensation. Our sample does not include the compensation schemes in Greece and Italy due to missing data for their banks, but we would expect that the effect would probably be similar to the one observed in Spain. Our regression results indicate that the effect of bailout policies and government participation in this process has been very heterogeneous across European countries, which explains in part the European banking sector's slow recovery the from the GFC of 2008.

Finally, the lack of government activism in terms of restructuring activities and weak governance of distressed banks in Europe gave bank managers discretion in bank restructuring activities. Such a situation has led to moral hazard and incentivised zombie lending in Europe (Andrews and Petroulakis, 2019). It has also not incentivised bank managers to implement restructuring changes. The opposite situation occurred in the US bailouts. The bailout mechanism, mostly in preferred cumulative shares, included covenants which instituted constant government monitoring but also incentivised bank managers to implement restructuring changes aimed at bank recovery to avoid potential appointment of government officials to the board. As mentioned, five missed quarterly dividend payments by the bank would give the Treasury the option to ask for permission to send a (non-voting) observer to board meetings. If the institution missed six quarterly dividend payments, the Treasury had the right to appoint up to two board members (Muecke et al., 2021). The authors document that this kind of mechanism has not only incentivised the distressed banks to implement the necessary restructuring changes but has also created market discipline at other banks by limiting, both ex ante and ex post, the moral hazard. Muecke et al. (2021) namely document that after Vikram Pandit, CEO of Citigroup, was fired, there was a rapid increase in bank exit from the CPP due to the redemption of shares owned by the US Treasury.

Concluding remarks and policy recommendations

Our empirical assessment of the bailout approaches in the US and Europe delivered several important policy recommendations. Firstly, Europe should create a unified resolution system, which would allow for a homogeneous response across the member states of the EU during a banking crisis. This would prevent banks being left in distress due to the poor quality of their respective government. Secondly, the Resolution Authority should have a control of the funds. This would allow sufficient recapitalisation of the distressed banks in the Eurozone, independently from the fiscal situation of each individual country. Thirdly, there should be a clear demarcation on the role of the Resolution Authority between the management and governance functions. Our results strongly suggest that an active role of the Resolution Authority in corporate governance functions at distressed banks would enable it to intervene in crucial matters.

The US experience lends credence to this argument. For example, the Resolution Authority should have the power to appoint representatives, to influence the management structure of a bank, and to affect bank compensation. However, it should not be actively involved in the bank management activities or restructuring changes. Nevertheless, it should undertake a continuous monitoring role under the 'sanction' of preserving the responsibility of appointing its own representatives. This would enhance market discipline as banks might attempt any such development. Finally, the governance role of the Resolution Authority over the distressed banks should be time constrained. In the end, the Resolution Authority should have the opportunity to become a more active participant in management activity, as was in case in the US during the Global Financial Crisis.

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ANNEX 1. DEFINITIONS OF VARIABLES

Duration – the duration of government ownership defined as the difference between the date of government withdrawal and its entry into a bank. The variable is expressed in years

Voting Rights – a variable indicating 1 if a government has taken voting rights in a bailed out-bank, 0 otherwise. The stakeholding is treated for the subsequent four years

Nationalised – a dummy variable indicating 1 if a government has taken majority stake in a bailed-out bank, 0 otherwise. The stakeholding is treated for the subsequent four years

Non-intervened – a dummy variable indicating 1 if a bank has not experienced any type of government intervention. The stakeholding is treated for the subsequent four years

Nationalised otherwise – a dummy variable indicating 1 if a government has taken minority stake in a bailed-out bank. The stakeholding is treated for the subsequent four years

Gov. participation – a dummy variable indicating 1 if a government has taken any stake in a bailed-out bank, 0 otherwise. The stakeholding is treated for the subsequent four years

Unempl. Rate – unemployment rate (%)

Inflation – change in the consumer price index (CPI) (%)

GDP – GDP growth (%)

Capital Ratio – bank's total capital in relation to bank-weighted asset

ROAA – return on average asset

Size (ln asset) – a variable indicating the size of a bank expressed in natural logarithm

mngmt_change – a variable indicating 1 if there was a management change in the year of government intervention, 0 otherwise

CEO change – a variable indicating 1 if there was a management change in the year of government intervention, 0 otherwise

Other benefits paid to CEO – cash compensation plus the stock and option gains realised (including received perks) paid to CEO expressed in natural logarithm; source: S&P

Current and future reserves on employee compensation – salaries, wages, bonuses, commissions, changes in reserve for future stock option expense, and other employee benefit costs covering any expenses related to employment or retirement benefits, whether paid or deferred, recognised during the period expressed in natural logarithm; source: S&P

Total compensation paid to CEO or equivalent – total compensation paid to a bank CEO expressed in natural logarithm; mln USD; source: Bloomberg or S&P.

Total compensation paid to executives – total compensation paid to bank executives expressed in natural logarithm; source: Bloomberg

Total salaries and bonus amount paid to CEO – total salaries and bonuses paid to a bank CEO expressed in natural logarithm; source: Bloomberg

Total salaries and bonus amount paid to executives – total salaries and bonuses paid to bank executives expressed in natural logarithm; source: Bloomberg

Total salary and bonus paid to executives/number of executives – average salary plus bonus portion of executive compensation paid to executives calculated as total salary and bonus paid to executives/number of executives; source: Bloomberg

Source: Authors (2022)

ANNEX 2. DETAILED REGRESSION RESULTS

Table A1 The effect of government participation on compensation structure at European and US banks in the period 2007- 2018

The regression results include the time-fixed effect model with lagged bank control variables and macro variables on compensation schemes at banks. The compensation data come from Bloomberg. The government participation is a dummy variable if a government has been involved in the bailout of a bank. The government participation holds for the four-year period since the intervention. The control sample involves both otherwise bailed-out and non-bailed-out peer banks.

Variables	(1) Total compensation paid to CEO	(2) Other benefits paid to CEO	(3) Current and future reserves on employee compensation	(4) Total compensation paid to CEO or equivalent	(5) Total compensation paid to executives	(6) Total salaries and bonus amount paid to CEO or equivalent	(7) Total salaries and bonus amount paid to executives	(8) Total salary and bonus paid to executives/ number of executives
L1.Gov. participation	0.0291 (0.176)	-0.521** (0.213)	0.445** (0.145)	-0.465*** (0.112)	-0.199 (0.120)	0.0803 (0.161)	-0.309 (0.217)	-0.417** (0.169)
Unempl. rate	-0.0215 (0.0187)	0.0230 (0.0322)	0.0308 (0.0213)	-0.000913 (0.0114)	0.00584 (0.00977)	0.0391*** (0.00999)	0.0102 (0.00769)	0.0122* (0.00575)
inflation	0.148*** (0.0280)	0.0494 (0.108)	0.00607 (0.0724)	0.252** (0.0786)	0.409*** (0.0963)	0.149*** (0.0375)	0.399*** (0.0796)	0.0382 (0.0456)
GDP	0.310** (0.104)	0.407*** (0.0851)	0.199** (0.0718)	0.0829 (0.105)	0.0445 (0.0900)	0.0430 (0.0454)	0.0400 (0.0656)	0.0172 (0.0398)
L1.Capital Ratio	0.00784 (0.00460)	0.00778 (0.00500)	-0.0104*** (0.00216)	0.0142* (0.00600)	-0.00417 (0.00612)	0.0199*** (0.00209)	-0.00398 (0.00308)	0.00827*** (0.00117)
L1.ROAA	0.191** (0.0756)	0.199** (0.0678)	0.0389*** (0.0107)	0.236** (0.0736)	0.241** (0.0755)	0.163** (0.0572)	0.192** (0.0685)	0.158** (0.0506)
L1.Size (ln asset)	0.397*** (0.0217)	0.428*** (0.0208)	0.850*** (0.00942)			0.196*** (0.0229)	0.280*** (0.0174)	0.283*** (0.0124)
Constant	9.084*** (0.476)	8.199*** (0.361)	2.993*** (0.309)	9.865*** (0.446)	11.25*** (0.421)	10.08*** (0.232)	11.06*** (0.299)	10.04*** (0.244)
Observations	642	558	1,648	639	706	667	704	704
R-squared	0.536	0.613	0.951	0.308	0.279	0.157	0.325	0.353
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Clustered SE	YES	YES	YES	YES	YES	YES	YES	YES

Note: *The sample covers bailed-out banks as well as their non-bailed-out peers in specific countries. The sample period covers the years between 2007 and 2018.

Source: Authors' calculations (2022)

Table A2 The effect of government participation on compensation structure at European banks in the period 2007-2013

The regression results include the country- and time-fixed effect model with lagged bank control variables and macro variables on different compensation schemes at banks. The compensation data come from Bloomberg. The government participation is a dummy variable if a government has been involved in the bailout of a bank. The government participation holds for the four-year period since the intervention. The sample involves both otherwise bailed-out and non-bailed-out peer banks. The missing variables for some country dummies indicate a lack of compensation data for banks from these countries.

Variables	(1) Total compensation paid to CEO	(2) Other benefits paid to CEO	(3) Current and future reserves on employee compensation	(4) Total compensation paid to CEO or equivalent	(5) Total compensation paid to executives	(6) Total salaries and bonus amount paid to CEO or equivalent	(7) Total salaries and bonus amount paid to executives	(8) Total salary and bonus paid to executives/ number of executives
L1.Gov. participation	0.489*** (0.132)	0.108 (0.602)	0.207 (0.613)	-0.148 (0.477)	0.497 (0.385)	0.197 (0.763)	0.305 (0.401)	-0.00596 (0.387)
Unempl. rate	-0.0168 (0.0547)	0.142 (0.0802)	-0.0462 (0.0310)	-0.119 (0.0922)	-0.0282 (0.0465)	-0.193 (0.136)	0.0189 (0.0260)	-0.0159 (0.0280)
Inflation rate	-0.0843* (0.0452)	-0.0555 (0.0727)	-8.89e-05 (0.0384)	-0.293 (0.193)	-0.340* (0.168)	-0.177 (0.254)	-0.221* (0.109)	-0.160 (0.106)
GDP	-0.0284 (0.0381)	0.0514*** (0.00844)	-0.00638 (0.0158)	-0.0574 (0.0399)	-0.0413 (0.0304)	-0.101 (0.0851)	-0.0225 (0.0197)	-0.0291 (0.0199)
L1.Capital Ratio	0.0134 (0.0121)	0.0152 (0.0171)	0.00812 (0.0175)	0.0504 (0.0317)	-0.0528 (0.0327)	0.136* (0.0740)	-0.0454 (0.0357)	-0.0181 (0.0288)
L1.ROAA	0.0815 (0.0466)	0.120 (0.0816)	-0.00439 (0.0303)	0.182 (0.452)	0.266 (0.254)	-0.138 (0.160)	0.179 (0.195)	0.0721 (0.178)
L1.Size (ln asset)	0.328*** (0.0469)	0.309* (0.118)	0.955*** (0.0818)	0.481* (0.254)	0.436** (0.168)	0.228 (0.317)	0.363** (0.128)	0.266** (0.118)
Belgium	-0.199 (0.166)			-0.757*** (0.222)	-2.318*** (0.205)	-0.392 (0.419)	-2.433*** (0.213)	-1.099*** (0.178)
Denmark	2.620*** (0.133)			-2.294*** (0.333)	-2.316*** (0.180)	-3.014*** (0.469)	-1.727*** (0.158)	-1.484*** (0.142)
France	-0.0216 (0.271)			-0.724** (0.267)	-1.963*** (0.163)	0.0456 (0.425)	-1.794*** (0.134)	-0.546*** (0.143)
Germany	0.380*** (0.0407)			-0.624* (0.281)	-0.745*** (0.230)	-2.680*** (0.348)	-0.830*** (0.232)	-0.530** (0.207)
Iceland	4.501*** (0.199)			4.414*** (1.292)	3.745*** (0.762)	3.863* (1.781)	3.484*** (0.542)	4.889*** (0.510)
Netherlands	0.649*** (0.131)				-1.266*** (0.327)	-0.274 (0.784)	-1.240*** (0.250)	-0.608** (0.232)
Slovenia	-0.459** (0.206)	-0.901 (0.497)	0.362* (0.132)	-1.558* (0.803)	-1.803*** (0.493)	-2.900** (1.086)		
Spain	0.531 (1.013)	-2.100 (1.525)	1.070 (0.627)	1.947 (1.562)	-0.221 (0.814)	3.450 (2.302)	-1.152* (0.517)	0.443 (0.525)
Switzerland	0.794*** (0.0953)	0.987* (0.366)	0.288*** (0.0568)	-0.582 (0.357)	-1.480*** (0.365)	-1.147* (0.564)	-1.630*** (0.297)	0.0608 (0.283)

Variables	(1) Total compensation paid to CEO	(2) Other benefits paid to CEO	(3) Current and future reserves on employee compensation	(4) Total compensation paid to CEO or equivalent	(5) Total compensation paid to executives	(6) Total salaries and bonus amount paid to CEO or equivalent	(7) Total salaries and bonus amount paid to executives	(8) Total salary and bonus paid to executives/ number of executives
United Kingdom	0.674*** (0.135)	0.364 (0.342)	-0.0779 (0.189)	0.625 (0.350)	0.165 (0.315)	-0.0738 (0.544)	-0.265 (0.257)	0.487* (0.236)
Ireland				0.194 (1.021)	-1.380* (0.635)	0.933 (1.540)	-1.765*** (0.527)	-0.404 (0.500)
Constant	9.706*** (0.754)	8.686*** (1.655)	2.160 (1.165)	9.407*** (2.512)	12.24*** (2.002)	10.98*** (2.873)	12.35*** (1.540)	11.36*** (1.412)
Observations	167	83	460	175	216	203	213	213
R-squared	0.823	0.675	0.893	0.378	0.391	0.346	0.394	0.373
Country FE	YES	YES	YES	YES	YES	YES	YES	YES
Clustered SE	YES	YES	YES	YES	YES	YES	YES	YES