

The impact of Shareholder Rights Directive II on the level and structure of CEO compensation¹

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Abstract

Over the last decade, CEO pay has increased drastically. The Shareholder Rights Directive II (“SRD II”) enacted by the EU is considered one solution to reduce potentially excessive executive pay but its effectiveness is unclear. To this end, this study investigates the impact of SRD II on the level and structure of CEO compensation in German and Austrian firms, compared to Swiss firms that did not experience a change in compensation-related regulation. Findings reveal that SRD II is not effective in reducing executive pay levels but promotes the use of deferred pay.

Relevance to practice

These findings are interesting to standard setters and shareholders alike. They contribute to standard setters’ understanding of the outcomes and the effectiveness of the SRD II implementation in practice and facilitate shareholders’ decision-making relating to CEO remuneration practices.

Keywords

CEO compensation, Shareholder Rights Directive II, pay-for-performance, Say on Pay, compensation disclosure, difference-in-difference

1. Introduction

On June 9, 2017, the European Parliament and the Council of the European Union adopted the Directive 2017/828, also known as SRD II, and required it to be included into EU members’ law by June 10, 2019. The SRD II is the revised edition of Directive 2007/36/EC, with two additional provisions. Article 9a and 9b outline the principles of “Say on Pay” and require more transparency of executive remuneration reports.

Similar policies, such as the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank”) in the United States and the Directors’ Remuneration Report Regulation (“DRR”) in the United Kingdom, are found to create mixed results in governing CEO compensation levels and compensation structure. In particular, the effect of

such policies on compensation levels is ambiguous, with some studies finding that the level of CEO compensation still seems to have increased after Dodd-Frank (Brunarski et al. 2015; Iliev and Vitanovaa 2019; Kronlund et al. 2018), whereas others find the opposite (Carter and Zamora 2007; Correa and Le1 2016; Kronlund and Xu 2016). Generally, however, prior literature documents a shift in compensation structure towards more performance-based compensation (Burns and Minnick 2013; Fisch et al. 2018; Obermann 2018).

This study aims to examine the effects of the introduction of SRD II on the level and structure of CEO compensation in European Union member countries, specifically Germany and Austria. To do so, this study employs a

difference-in-differences (“DiD”) regression design using data from the years 2016 to 2022, excluding 2019 as the year of implementation. The treatment group for the DiD analysis consists of listed firms in Germany and Austria, which experience the introduction of SRD II, and the control group consists of listed firms in Switzerland. The rationale for choosing Switzerland as the control group is that Switzerland is not an EU member and, thus, does not have to implement SRD II. In addition, Switzerland does not implement concurrently policy changes regarding executive compensation.

Based on a sample comprising 1,822 firm-year observations relating to 477 firms with available compensation level data, and 1,524 firm-year observations relating to 396 firms with available compensation structure data, findings from the DiD analysis reveal that the level of CEO compensation increases after the introduction of SRD II, which somewhat conflicts with its intended purpose. In particular, the enhanced transparency of the remuneration report mentioned in Article 9b of SRD II may be one reason for the increase in executive compensation levels. Although intended to enhance shareholders’ ability to monitor executive compensation, CEOs could also compare their compensation with peers and demand higher compensation than their peers, ratcheting compensation levels upwards (DiPrete et al. 2010). However, findings also reveal an increase in the deferred pay ratio. To the extent that deferred pay could align the CEO’s incentives with those of shareholders, the increase in deferred pay could be considered effective from an SRD II implementation perspective. However, it is to be noted that the stronger use of deferred compensation is also associated with increased managerial risk-taking and rent extraction (Bebchuk et al. 2002; Coles et al. 2006) which could constitute potentially detrimental effects of using such compensation components. Overall, SRD II did not seem to have achieved its intended purpose of bringing down executive compensation levels, but it could have increased the incentive effect of compensation, to the extent that deferred compensation is effective in achieving that.

2. Institutional background and literature review

2.1. Background on executive compensation

Executive compensation in listed companies has been a topic of research for many years because of the drastic increase in executive pay (Bebchuk and Grinstein 2005; Murphy 2013). Principal-agency theory suggests that efficient executive compensation plays an important role in aligning the incentives of executives with those of shareholders. Specifically, executive pay incentivizes executives to perform in the best interest of shareholders by relating their compensation to the firm’s achieved performance (Jensen and Meckling 1976; Olaniyi 2019). In particular, the use of deferred compensation packages

is critically discussed in the literature (Bebchuk et al. 2002; Coles et al. 2006). On the one hand, such compensation packages are intended to reduce managerial myopia and align CEOs’ incentives with those of their firms’ shareholders. On the other hand, however, prior literature finds the use of large deferred compensation packages to be associated with agency problems, such as increased managerial risk-taking and rent extraction (Bebchuk et al. 2002; Coles et al. 2006). Because executive compensation has increased in many countries over the last decades, without a comparable increase in firm performance, dissatisfaction among shareholders and social concerns regarding income disparity have been rising (Wang and Wu 2021).

2.2. Shareholder Rights Directive II

In an attempt to reduce excessive executive compensation, the European Parliament and the Council of the European Union passed the Shareholder Rights Directive 2017/828, which EU member countries had to incorporate into federal law. Article 9a and 9b of this directive provide shareholders with the rights to vote annually on the remuneration report, and at least every 4 years on the remuneration policy (“Say on Pay”) (Directive (EU) 2017/828, 2017). Thereby, SRD II aims to improve shareholders’ ability to voice concerns about the compensation policy and report (Directive (EU) 2017/828, 2017) and address potential agency problems (Bebchuk and Grinstein 2005).

2.3. Say on pay

Prior literature studying similar compensation-related legislation in the world, such as the Dodd-Frank in the US and the DRR in the UK finds mixed evidence on the effectiveness of Say on Pay on the level and the structure of executive compensation. In particular, findings regarding compensation levels are unclear. Whereas some studies find that executive compensation does not decrease following Dodd-Frank in the US (Guadalupe et al. 2013; Burns and Minnick 2013) or DRR in the UK (Conyon and Sadler 2010), other studies find that executive compensation levels decrease following the implementation of Say on Pay laws across countries (Correa and Lel 2016; Balsam et al. 2016). These studies are similarly opposite regarding the effect of such legislation on executive compensation structure, with some finding no significant change in incentive pay for CEOs (Guadalupe et al. 2013; Burns and Minnick 2013; Conyon and Sadler 2010) and other documenting increases in performance-based pay (Correa and Lel 2016; Balsam et al. 2016).

However, there is also literature suggesting that executive compensation levels increase following the introduction of Say on Pay laws (Kronlund et al. 2018; Iliev and Vitanovaa 2019). These studies suggest that Say on Pay laws do reduce apparently excessive fixed salaries of CEOs and at the same time increase CEO’s incentive compensation. Although this is consistent with the intended

goals of such regulation, the increase in incentive pay often seems to outweigh the decrease in the reduction of fixed salaries, leading to increases in total compensation.

2.4. Disclosure transparency

Article 9b of SRD II specifically mentions increased transparency of the remuneration report. This Article requires EU members to publicly disclose both the fixed and variable components of total compensation on an individual basis in the remuneration report, which could alleviate information asymmetries between shareholders and executives (Jensen and Meckling 1976; Olaniyi 2019). Consistent with this, prior literature finds that the implementation of compensation disclosure regulation is associated with decreases in compensation levels and increases in the pay-for-performance sensitivity (IY Wang et al. 2020; Perry et al. 2001; Vafeas and Afxentiou 1998; Craighead et al. 2004). However, more transparent disclosure is also associated with the phenomenon of ‘leapfrogging’, i.e., with compensation benchmarking leading to CEOs demanding higher compensation as their peers (DiPrete et al. 2010). In particular, the selection of (high compensation) peers to benchmark compensation against is associated with compensation levels ratcheting upwards (De Vaan et al. 2019; Faulkender and Yang 2013; Laschever 2013). Therefore, it is the transparency in the remuneration disclosure specifically that could incentivize CEOs to compare compensation with peers and attempt to beat others’ compensation leading to an increase in executive compensation levels that is not based on firm performance.

2.5. Hypotheses

Because of the mixed evidence of the effectiveness of compensation (disclosure) regulation and Say on Pay laws, the hypotheses regarding the effect of SRD II on executive compensation levels and structure are presented in the null-form:

H1: The level of CEO compensation in German and Austrian firms does not change after the implementation of SRD II.

H2: The ratio of CEO deferred pay to total CEO compensation in German and Austrian firms does not change after the implementation of SRD II.

3. Methodology

3.1. Identification strategy

To examine the aforementioned hypotheses, this study employs a difference-in-differences (DiD) research design. The pre-period of the DiD relates to the years before the implementation of SRD II from 2016 to 2018, and

the post-period related to the years after the SRD II from 2020 to 2022. The transition year 2019 is excluded. The treatment group of the DiD regression consists of listed companies in Germany and Austria that experience the implementation of SRD II; the control group consists of listed companies in Switzerland, which do not experience the implementation of SRD II. Switzerland constitutes a suitable control group country because it is comparable to Germany and Austria, but it is not a member of EU and EEA and, thus, is not under effect of SRD II (Fredriksson and Oliveira 2019). In addition, Switzerland does not experience changes in compensation-related regulation in 2019.

3.2. Research design

This study employs two DiD regression models corresponding to the two aforementioned hypotheses to investigate the impact of the implementation of SRD II on the level and structure of CEO compensation:

$$\begin{aligned} \ln(\text{Total pay})_{i,t} = & \beta_0 + \beta_1 * \text{Post}_t + \beta_2 * \text{Treatment}_i + \beta_3 * \text{Post}_t \\ & * \text{Treatment}_i + \beta_4 * \text{Firm_performance}_{i,t} + \beta_5 * \\ & \text{Firm_performance}_{i,t-1} + \beta_6 * \text{Board_size}_{i,t} + \beta_7 * \\ & \text{Board_independence}_{i,t} + \beta_8 * \text{Institutional_ownership}_{i,t} \\ & + \beta_9 * \text{Firm_size}_{i,t} + \beta_{10} * \text{Leverage}_{i,t} + \beta_{11} * \\ & \text{Industry Fixed Effects}_i * \text{Year Fixed Effects}_t + \beta_{12} * \\ & \text{Firms Fixed Effects}_i + \varepsilon_{i,t} \end{aligned} \quad (1)$$

$$\begin{aligned} \ln(\text{Deferred pay})_{i,t} = & \beta_0 + \beta_1 * \text{Post}_t + \beta_2 * \text{Treatment}_i + \beta_3 * \\ & \text{Post}_t * \text{Treatment}_i + \beta_4 * \text{Firm_performance}_{i,t} + \\ & \beta_5 * \text{Firm_performance}_{i,t-1} + \beta_6 * \text{Board_size}_{i,t} + \beta_7 * \\ & \text{Board_independence}_{i,t} + \beta_8 * \text{Institutional_ownership}_{i,t} \\ & + \beta_9 * \text{Firm_size}_{i,t} + \beta_{10} * \text{Leverage}_{i,t} + \beta_{11} * \\ & \text{Industry Fixed Effects}_i * \text{Year Fixed Effects}_t + \beta_{12} * \\ & \text{Firms Fixed Effects}_i + \varepsilon_{i,t} \end{aligned} \quad (2)$$

The dependent variable *Total pay* in equation (1) is the natural logarithm of the CEO’s total compensation in year *t*. The use of natural logarithms is consistent with prior literature (e.g., Correa and LeL 2016) and accounts for the skewness of the pay distribution. The dependent variable *Deferred pay* in equation (2) is the ratio of the sum of long-term incentive plans, restricted stock awards, and all other compensation to the CEO’s total compensation.

The indicator variable *Post* relates to whether a firm-year relates to the post-period from 2020 to 2022 or to the pre-period from 2016 to 2018. The indicator variable *Treatment* relates to whether company *i* is located in a country that adopts SRD II, i.e., Germany or Austria, or not, i.e., Switzerland. The interaction of these two indicator variables is the DiD estimator and the main variable of interest.

Several studies show that the level and structure of CEO compensation is associated with firm-specific and governance control variables such as firm performance (Bouteska and Mefteh-Wali 2021; Burns and Minnick 2013), firm size (Bryson et al. 2014; MJ Conyon 2014), firm leverage (Alves et al. 2016; Coles et al. 2006), board size, board independence, and institutional ownership

(MJ Conyon and He 2012; MJ Conyon and Peck 1998; Core et al. 1999; Firth et al. 2007; Yermack 1996). Therefore, control variables relating to these characteristics are included in equation (1) and (2), as well as fixed effects relating to the firm and industry-year. Standard errors are clustered at the country-level and all variables are winsorized at the first and ninety-ninth percentile. Table 1 presents variable definitions for all variables.

Table 1. Variable definitions.

Variables	Definition of variables
Dependent variables	
<i>Total pay</i>	The natural logarithm of the CEO's total compensation.
<i>Deferred pay</i>	The ratio of the sum of long-term incentive plans, restricted stock awards, and all other compensation to the CEO's total compensation.
Independent variables	
<i>Post_{<i>i</i>}</i>	The indicator variable equals 1 if observations are situated after 2019, and 0 otherwise.
<i>Treatment_{<i>i</i>}</i>	The indicator variable equals 1 if observations are either German or Austrian firms, and 0 otherwise.
<i>Post_{<i>i</i>} * Treatment_{<i>i</i>}</i>	The interaction term between Post and Treatment variable indicates the change in the level or structure of CEO pay after SRD II
Control variables	
<i>Firm_performance_{<i>i,t</i>}</i>	It is measured either by ROA or Tobins'Q. ROA is the ratio of net income to total assets. Tobins'Q is the ratio of market value of equity to total assets.
<i>Firm_performance_{<i>i,t-1</i>}</i>	The lagged variable of the firm performance variable.
<i>Firm_size_{<i>i,t</i>}</i>	For the equation (1), it is measured by the natural logarithm of total assets (Bouteska and Mefteh-Wali 2021). For the equation (2), it is measured by the natural logarithm of revenue (Burns and Minnick 2013).
<i>Leverage_{<i>i,t</i>}</i>	The ratio of total debts to total assets.
<i>Board_size_{<i>i,t</i>}</i>	The total number of directors on the board.
<i>Board_independence_{<i>i,t</i>}</i>	The ratio of independent directors to total number of directors on the board.
<i>Institutional_ownership_{<i>i,t</i>}</i>	The percentage of shares held by institutional investors.

3.3. Sample selection

CEO compensation data and firm financial information is obtained from LSEG Workspace. Because SRD II does not apply to listed companies outside of the EU, data for all other listed companies is obtained from LSEG Workspace, yielding 5,684 firm-year observations relating to 1,031 firms. Further sampling criteria require existing data for all variables and exclude financial services firms as well as small firms with less than USD 20 million in total assets. Because data availability differs regarding compensation structure, the sample sizes differ across estimations of equations (1) and (2). Table 2 presents the sample selection process. The sample for estimation of equation (1) comprises 1,822 firm-year observations relating to 477 firms; the sample for estimation of equation (2) comprises 1,524 firm-year observations relating to 396 firms.

Table 2. Sample selection procedure.

	(1)		(2)	
	Firm-Year observations	Firms	Firm-Year observations	Firms
Original sample	5,684	1,031	5,684	1,031
Less: financial services firms	(1,110)	(207)	(1,110)	(207)
Less: missing relevant data	(2,703)	(333)	(3,024)	(424)
Less: small firms that have total value of assets below 20 million USD	(49)	(14)	(22)	(4)
Final sample	1,822	477	1,524	396

Table 3 presents descriptive statistics for both samples. Panel A does not reveal noticeable differences in average compensation levels before and after the implementation of SRD II in the treatment or control group. In contrast, Panel B reveals an increase in the unconditional mean of the deferred compensation ratio of 8% for treatment firms after SRD II, whereas the control group did not change noticeably.

4. Results

Table 4 presents regression summary statistics for estimations of equations (1) and (2) relating to H1 and H2 in Panels A and B, respectively. Both panels include two versions of the respective equations using either an accounting-based measure of firm performance or a market-based measure of firm performance for robustness.

The findings from Panel A reject the null-hypothesis in H1 and reveal that the main variable of interest, i.e., the DiD estimator relating to the interaction of *Post* and *Treatment*, is positive and statistically significant across both columns, suggesting that CEO compensation levels in treatment group firms from Germany and Austria increase after the implementation of SRD II vis-à-vis control group firms from Switzerland. In terms of economic

Table 3. Descriptive statistics.

Panel A: Descriptive statistics relating to the estimation sample of equation (1)											
	Variables	Treatment group					Control group				
		Obs	Mean	Std. dev.	Min	Max	Obs	Mean	Std. dev.	Min	Max
Before	<i>Ln_total_pay</i>	544	14.079	1.184	7.54	17.019	245	14.191	1.315	4.751	16.752
	<i>Post</i>	544	0	0	0	0	245	0	0	0	0
	<i>Treatment</i>	544	1	0	1	1	245	0	0	0	0
	<i>ROA</i>	544	.035	.069	-.537	.221	245	.043	.101	-.537	.221
	<i>Lag_ROA</i>	544	.033	.073	-.482	.2	245	.044	.093	-.482	.2
	<i>Tobins'Q</i>	544	1.045	.988	.084	7.375	245	1.447	1.176	.084	7.147
	<i>Lag_Tobins'Q</i>	544	1.085	.998	.094	6.387	245	1.52	1.242	.119	7.375
	<i>Board_size</i>	544	6.199	4.477	1	20	245	6.514	2.816	1	20
	<i>Board_ind_share</i>	544	.572	.418	0	1	245	.76	.361	0	1
	<i>Institutional_own</i>	544	27.411	18.875	0	75.829	245	27.736	15.804	0	72.792
	<i>Firm_size</i>	544	21.242	2.196	17.046	26.013	245	21.217	1.703	17.352	25.704
	<i>Leverage</i>	544	.227	.16	0	.746	245	.205	.159	0	.746
After	<i>Ln_total_pay</i>	619	14.148	1.113	8.704	18.179	414	13.963	1.505	4.037	20.79
	<i>Post</i>	619	1	0	1	1	414	1	0	1	1
	<i>Treatment</i>	619	1	0	1	1	414	0	0	0	0
	<i>ROA</i>	619	.017	.094	-.537	.221	414	.019	.123	-.537	.221
	<i>Lag_ROA</i>	619	.014	0.094	-.482	.2	414	.02	.12	-.482	.2
	<i>Tobins'Q</i>	619	1.162	1.358	.084	7.375	414	1.618	1.598	.084	7.375
	<i>Lag_Tobins'Q</i>	619	1.245	1.44	.094	7.375	414	1.635	1.591	.094	7.375
	<i>Board_size</i>	619	5.774	4.147	1	20	414	6.087	2.588	1	20
	<i>Board_ind_share</i>	619	.593	.42	0	1	414	.776	.334	0	1
	<i>Institutional_own</i>	619	18.417	21.49	0	75.829	414	17.879	18.909	0	75.829
	<i>Firm_size</i>	619	21.319	2.158	17.046	26.013	414	20.894	1.692	17.046	25.751
	<i>Leverage</i>	619	.259	.16	0	.746	414	.243	.187	0	.746
Panel B: Descriptive statistics relating to the estimation sample of equation (2).											
	Variables	Treatment group					Control group				
		Obs	Mean	Std. dev.	Min	Max	Obs	Mean	Std. dev.	Min	Max
Before	<i>Deferred_pay</i>	430	.262	.248	0	.985	234	.282	.202	0	.922
	<i>Post</i>	430	0	0	0	0	234	0	0	0	0
	<i>Treatment</i>	430	1	0	1	1	234	0	0	0	0
	<i>ROA</i>	430	.037	.067	-.466	.22	234	.047	.094	-.466	.22
	<i>Lag_ROA</i>	430	.035	.074	-.48	.2	234	.043	.093	-.48	.2
	<i>Tobins'Q</i>	430	1.05	.939	.074	7.147	234	1.444	1.194	.074	7.147
	<i>Lag_Tobins'Q</i>	430	1.099	.971	.085	6.387	234	1.524	1.263	.119	7.336
	<i>Board_size</i>	430	6.605	4.577	1	20	234	6.509	2.791	1	20
	<i>Board_ind_share</i>	430	.604	.401	0	1	234	.766	.358	0	1
	<i>Institutional_own</i>	430	29.616	17.997	0	74.862	234	27.998	15.983	0	72.792
	<i>Firm_size</i>	430	21.196	2.123	15.851	25.471	234	20.769	1.86	15.851	25.233
	<i>Leverage</i>	430	.225	.165	0	.753	234	.208	.161	0	.753
After	<i>Deferred_pay</i>	479	.285	.279	0	.985	381	.284	.224	0	.985
	<i>Post</i>	479	1	0	1	1	381	1	0	1	1
	<i>Treatment</i>	479	1	0	1	1	381	0	0	0	0
	<i>ROA</i>	479	.02	.087	-.466	.22	381	.022	.11	-.466	.22
	<i>Lag_ROA</i>	479	.017	.09	-.48	.2	381	.022	.113	-.48	.2
	<i>Tobins'Q</i>	479	1.155	1.316	.074	7.147	381	1.588	1.524	.074	7.147
	<i>Lag_Tobins'Q</i>	479	1.236	1.423	.085	7.336	381	1.629	1.55	.085	7.336
	<i>Board_size</i>	479	6.146	4.265	1	20	381	6.165	2.558	1	20
	<i>Board_ind_share</i>	479	.623	.406	0	1	381	.787	.327	0	1
	<i>Institutional_own</i>	479	19.797	21.968	0	74.862	381	18.44	19.168	0	74.862
	<i>Firm_size</i>	479	21.178	2.083	15.851	25.471	381	20.189	1.976	15.851	24.953
	<i>Leverage</i>	479	.263	.163	0	.753	381	.247	.186	0	.753

magnitude, the level of CEO compensation increases by approximately 6–8%. This finding is consistent with prior literature documenting an increase in compensation

levels following compensation disclosure or Say on Pay legislation (Brunarski et al. 2015; Fisch et al. 2018; Iliev and Vitanovaa 2019; Kronlund et al. 2018).

The findings from Panel B also reject the null-hypothesis in H2 and reveal that the interaction of *Post* and *Treatment* is positive and statistically significant across both columns, suggesting that the ratio of deferred pay of total pay in treatment group firms from Germany and Austria increases after the implementation of SRD II vis-à-vis control group firms from Switzerland. In terms of economic magnitude,

the ratio of deferred pay of total pay increases by approximately 3%. This finding is again consistent with prior literature documenting an increase in deferred compensation following compensation disclosure or Say on Pay legislation, which could explain the increase in overall compensation levels (Brunarski et al. 2015; De Vaan et al. 2019; DiPrete et al. 2010; Iliev and Vitanovaa 2019; Kronlund et al. 2014).

Table 4. Regression results.

<i>Panel A: Regression results for the model (1)</i>		
Variable	Firm performance defined as	
	Accounting-based approach	Market-based approach
	Ln_CEO_pay	Ln_CEO_pay
<i>I.post#I.treatment</i>	0.064*	0.078**
	(3.98)	(6.91)
<i>Lag_ROA</i>	0.012	
	(0.03)	
<i>Lag_Tobins'Q</i>		0.092*
		(3.11)
<i>Board_size</i>	0.017	0.017*
	(2.92)	(2.99)
<i>Board_ind_share</i>	-0.306	-0.318
	(-1.30)	(-1.29)
<i>Institutional_own</i>	0.002*	0.001*
	(3.12)	(3.48)
<i>Firm_size</i>	0.254	0.207
	(1.69)	(1.36)
<i>Leverage</i>	-1.055**	-0.997**
	(-4.76)	(-5.62)
<i>Constant</i>	9.016*	9.891*
	(3.06)	(3.31)
<i>Industry-Year Fixed Effect</i>	Yes	Yes
<i>Firm Fixed Effect</i>	Yes	Yes
Observations	1,747	1,747
R-squared	0.804	0.805
Adjusted R-squared	0.721	0.723
Within R-squared	0.020	0.027
<i>Panel B: Regression results for the model (2)</i>		
Variable	Firm performance defined as	
	Accounting based approach	Market based approach
	Var_pay	Var_pay
<i>I.post#I.treatment</i>	0.030**	0.030*
	(4.41)	(3.98)
<i>Lag_ROA</i>	0.164	
	(0.85)	
<i>Lag_Tobins'Q</i>		0.020
		(1.38)
<i>Board_size</i>	0.000	0.000
	(0.07)	(0.08)
<i>Board_ind_share</i>	-0.045	-0.043
	(-0.99)	(-0.98)
<i>Institutional_own</i>	0.000	0.000
	(0.80)	(0.48)
<i>Firm_size</i>	0.010	0.007
	(0.24)	(0.18)
<i>Leverage</i>	-0.063	-0.075
	(-0.66)	(-0.64)
<i>Constant</i>	0.087	0.129
	(0.09)	(0.14)
<i>Industry-Year Fixed Effect</i>	Yes	Yes
<i>Firm Fixed Effect</i>	Yes	Yes
Observations	1,461	1,461
R-squared	0.687	0.688
Adjusted R-squared	0.549	0.550
Within R-squared	0.007	0.010

(t-statistics are in parentheses and corrected at the country level and robust to heteroskedasticity. *, ** and *** indicates significance at the 10, 5 and 1% levels, respectively).

5. Conclusion

In many countries, executive compensation has been increasing over the last decades, and this increase does not always seem to be linked to firm performance. The implementation of the Shareholder Rights Directive II is considered as a potential remedy for the increase in (potentially excessive) CEO compensation. However, prior literature studying similar compensation-related policies in the US and the UK provides mixed findings regarding the effectiveness of such policies in hampering the increase in CEO compensation (Balsam et al. 2016; Brunarski et al. 2015; Conyon and Sadler 2010; Ferri and Maber 2013). Therefore, this study investigates the effect of SRD II on the level and structure of CEO compensation in Germany and Austria compared to Switzerland in a difference-in-differences regression design.

The findings of this study reveal that the level of CEO compensation, and the ratio of deferred pay of total pay of listed firms in Germany and Austria increases significantly after the implementation of SRD II, compared to listed firms in Switzerland that did not experience a change in compensation-related regulation. The interpretation of these findings is twofold. On the one hand, the increase in deferred remuneration could suggest that executive compensation better aligns the incentives of CEOs with those of the shareholders of their firms, which was one stated aim of

SRD II and its Say on Pay laws aimed at giving shareholders more voice in managing executive compensation (Burns and Minnick 2013; Ferri and Maber 2013; Obermann 2018). On the other hand, the use of deferred compensation components seems to be associated with an overall increase in executive compensation (Iliev and Vitanovaa 2019; Kronlund et al. 2014), which could be an unintended outcome of the implementation of SRD II. Relatedly, the use of large deferred compensation packages could have unintended consequences relating to increased managerial risk-taking and rent extraction (Bebchuk et al. 2002; Coles et al. 2006). In addition, the increase in compensation disclosure transparency, although aimed at enhancing shareholders' ability to monitor executive compensation, also increases CEOs' ability to benchmark their compensation to their peers (De Vaan et al. 2019; Faulkender and Yang 2013; Laschever 2013), possibly inducing 'leapfrogging' practices and contributing to executive compensation ratcheting upwards.

Overall, the findings from this study are mostly critical of the effect of SRD II. Although, to the extent that deferred compensation is efficiently designed, it could have increased the incentive effect of compensation, SRD II did not seem to have achieved its intended purpose of bringing down executive compensation levels. Moreover, these findings highlight the need for more effective compensation regulation and call for further research to better understand the outcomes of compensation regulation in practice.

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Note

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