Value-Based CEO Equity Grants

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Internet Appendix

This internet appendix contains the following parts:

IA1 provides additional evidence on our method of identifying firms that use strict pay tracking.

IA2 provides a plot showing the relative presence of value-based vs. share-based practices

IA3 provides a robustness check with alternative definitions of value-based practices.

IA4 provides more details about the relationship between retention pressure and a firm's likelihood of using value-based practices in Logistic regression analysis.

IA5 provides more details about the relationship between corporate governance and a firm's likelihood of using value-based practices in Logistic regression analysis.

IA6 conducts a subsample GMM analysis on the relationship between corporate governance and value-based equity grants.

IA7 provides robustness checks for the GMM analysis.

Part IA1. Compensation Policies and Likelihood of Practicing Strict Pay Tracking

This robustness test examines the relationship between a firm's CEO compensation policies and the firm's tendency to practice strict pay tracking. It provides another validity check of our empirical method of identifying the strict pay-tracking practice.

1. Benchmarking Policies on CEO Compensation

We use the textual information provided in the *Compensation Discussion and Analysis* (CD&A) section of a firm's proxy statement to identify three types of policies for setting CEO's non-bonus compensation: (1) If a firm explicitly states that it does not use any external benchmark in setting CEO compensation, or does not mention any benchmark, we classify it as a *no-benchmark firm*. For such a firm, a benchmark is neither necessary nor binding in CEO compensation design. (2) If a firm states that it considers survey information in determining its CEO's compensation but does not specify which firms are included in the survey, we classify it as a *partial-benchmark firm*. Many partial-benchmark firms also state, in their proxy statements, that they do not treat the survey information as the sole or most dominant input in setting executive compensation. (3) Finally, if a firm discloses a specific group of peer companies that it uses to set its CEO's compensation, we classify it as a *peer-based-benchmark firm*. Many peer-based-benchmark firms also provide a target percentile for the relative position of their CEO's compensation within the peer group.

Because these three pay-setting-policy types differ in the specificity and dominance of benchmarks in the pay-setting process, we introduce a rank-based variable, *Benchmark Dominance*, to quantify a firm's benchmarking policy. The variable takes the value of zero for a non-benchmark firm, one for a partial-benchmark firm, and two for a peer-based benchmark firm.

2. CEO Benchmarking Policy and the Propensity to Practice Pay Tracking

Table A1 examines the relationship between *Benchmark Dominance* and a firm's likelihood of practicing strict pay tracking identified by our method. As in our baseline analysis, we control for market capitalization, growth potential (Tobin Q), return volatility, and various governance-related variables. We also include industry- and year-fixed effects in this analysis. We find a strong and positive connection between the benchmark dominance level of a pay-setting policy and a firm's tendency to adopt strict pay-tracking practices. Specifically, the estimated coefficient of *Benchmark Dominance* is 0.5831 (*t*-statistic = 5.97).

Table A1

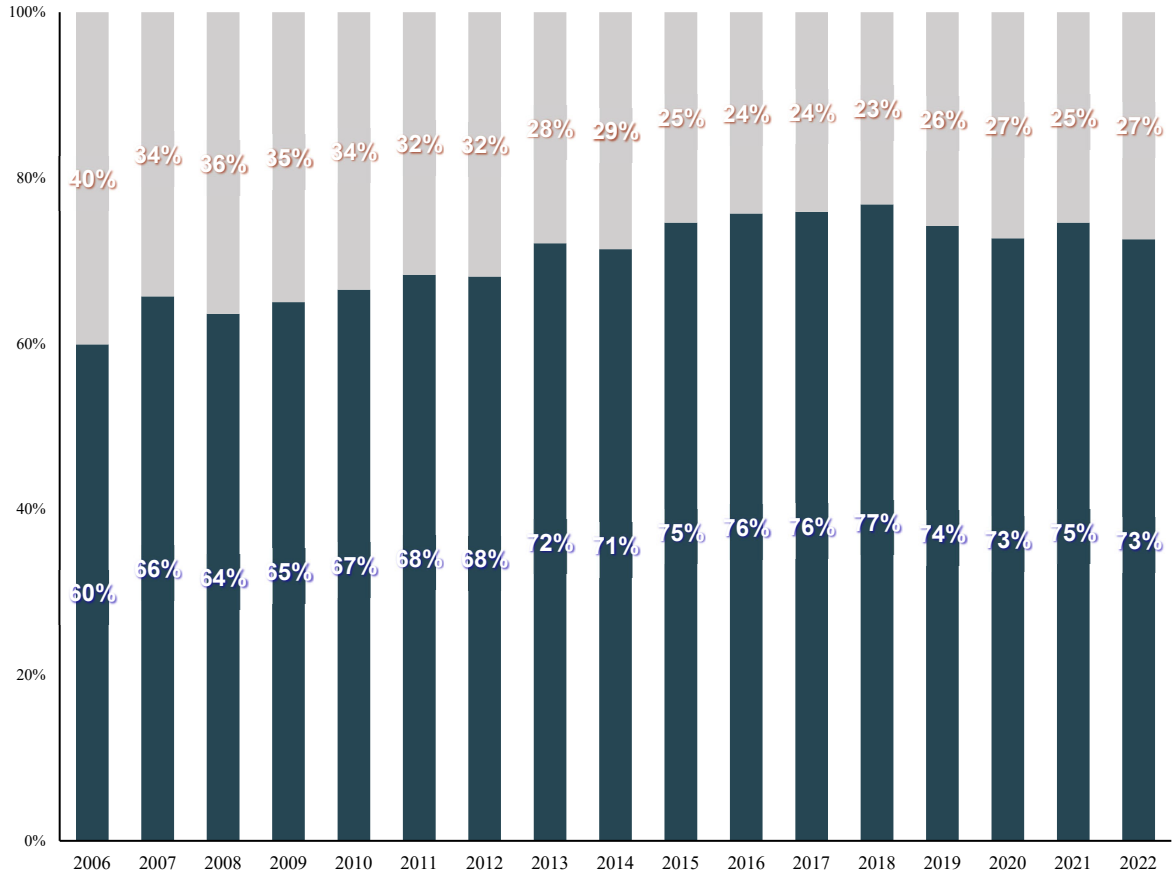
	Dep. Var.: Pay Tracking Dummy
Benchmark Dominance	**0.5831*** **
	(5.97)
Controls	Yes
Year FE	Yes
Ind FE	Yes
Observations	8,985
Pseudo R2	0.064

Part IA2 Relative Presence of Value-Based Vs. Share-Based Practices

Figure A1 illustrates the relative presence of firms that use value-based practices vs. those that do not (that is, ones that use share-based plans). The percentage of firms that use value-based practices increases from 60% in 2006 to 73% in 2022. By contrast, the percentage of firms that use share-based practices declines from 40% in 2006 to 27% in 2022.

Figure A1
Firms Making (Not Making) Value-Based CEO Equity Grants

Figure A1 illustrates the percentages of firms that make value-based CEO equity grants (dark blue) and firms that make share-based CEO equity grants (light grey). The sample includes all firms covered by the ExecuComp database that have information for defining value-based plans from 2006 to 2022.



Part IA3. Robustness Check: Identifying the Value-Based Equity Grant Practices

In part IA3, we replicate the main findings of value-based equity grant practices and their anti-incentive effects when the value-based grants dummies are identified on a stricter bandwidth (0.99, 1.01).

Figure A2 reports the percentage of firms using value-based and share-based equity plans. Tables A2-A3 report the results related to the anti-incentive effects of value-based equity grants.

Figure A2: Replicating Figure A1 with bandwidth (0.99, 1.01)

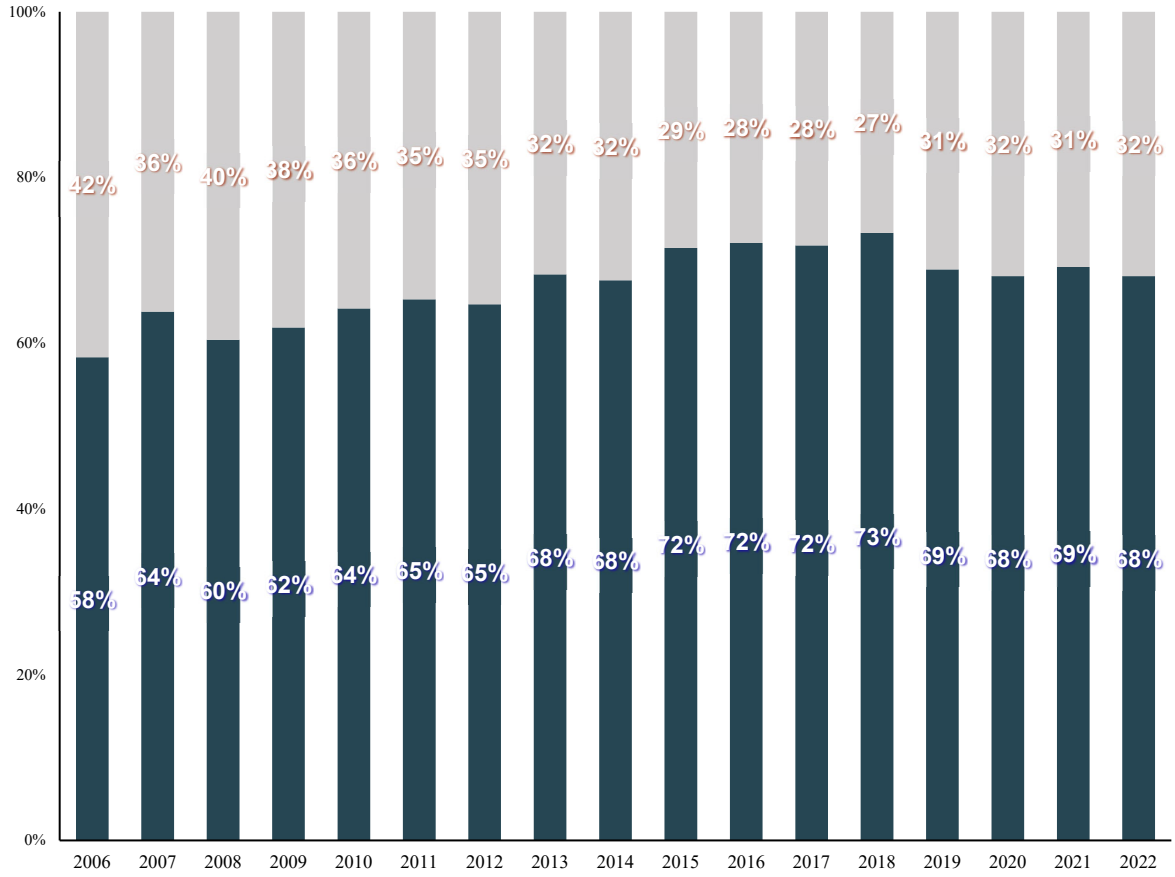


Table A2: Value-Based Equity Grants and the Ex Post Pay-Performance Sensitivity

This table replicates Table 3 in the manuscript when we use the bandwidth (0.99, 1.01) to define fixed-value plans, preset pay structure, and strict pay tracking.

	Dep. Var.: Ln (Equity Pay)			
	(1)	(2)	(3)	(4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Ln (MV) * Value-Based Practice	**-0.0656*** **	**-0.0847*** **	**-0.0801*** **	**-0.0711*** **
	(-7.46)	**(-6.17)**	**(-8.03)**	**(-7.33)**
Ln (MV)	0.4062***	0.4103***	0.4113***	0.4133***
	(23.81)	(15.47)	(20.01)	(24.42)
Value-Based Practice	1.0404***	1.3011***	1.3229***	1.0882***
	(7.92)	(6.18)	(8.83)	(7.50)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	25,907	8,928	16,811	20,916
Adjusted R-squared	0.763	0.785	0.757	0.767

Table A3: Value-Based Equity Grants and No. of Shares Granted

This table replicates Table 4 in the manuscript when we use the bandwidth (0.99, 1.01) to define fixed-value plans, preset pay structure, and strict pay tracking.

Panel A. Option Grants

	Dep. Var.: Ln No. of Granted Options			
	(1)	(2)	(3)	(4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Ret before Option Grant*Value-Based Practice	**-0.1506*** **	**-0.3134*** **	**-0.1355*** **	**-0.1869*** **
	(-3.31)	**(-5.37)**	**(-2.82)**	**(-3.82)**
Ret before Option Grant	-0.0321	-0.0363	-0.0531	-0.0089
	(-0.70)	(-0.65)	(-1.12)	(-0.18)
Value-Based Practice	-0.0671***	-0.0277	-0.0923***	-0.0394
	(-2.80)	(-0.64)	(-3.35)	(-1.50)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	12,371	2,955	9,498	9,371
Adjusted R-squared	0.712	0.791	0.706	0.719

Panel B. Stock Grants

	Dep. Var. Ln No. of Granted Stock Shares			
	(1)	(2)	(3)	4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Ret before Stock Grant*Value-Based Practice	**-0.0968*** **	**-0.1869*** **	**-0.0605** **	**-0.1287*** **
	(-2.83)	**(-3.50)**	**(-2.05)**	**(-3.55)**
Ret before Stock Grant	-0.0867***	-0.0997**	-0.1051***	-0.0729**
	(-2.76)	(-2.48)	(-3.22)	(-2.17)
Value-Based Practice	-0.0357*	-0.0299	-0.0645***	-0.0291
	(-1.74)	(-0.79)	(-2.65)	(-1.31)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	16,253	4,121	10,709	12,858
Adjusted R-squared	0.674	0.717	0.657	0.691

Part IA4. Retention Pressure and Value-Based Equity Grants: More Details

This robustness check provides more details for the results of Table 8. Instead of focusing on the summary retention pressure score, we include all seven retention-related variables in this analysis. Table A4 reports the results.

Table A4. Seven Proxies for Retention Pressure

	Dep. Var.: Value-Based Practice Dummy			
	(1)	(2)	(3)	(4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Citation	**0.0388*** **	**0.0311*** **	**0.0370*** **	**0.0395*** **
	(10.65)	**(6.88)**	**(9.51)**	**(10.16)**
Ln Network Size	**0.0737*** **	**0.0753** **	**0.0908*** **	**0.0669*** **
	(3.36)	**(2.56)**	**(3.72)**	**(2.85)**
CID NO	**-0.1697*** **	**-0.1072*** **	**-0.1258*** **	**-0.1995*** **
	(-6.44)	**(-3.06)**	**(-4.45)**	**(-7.30)**
Size Percentile	**0.0148*** **	**0.0196*** **	**0.0184*** **	**0.0163*** **
	(12.94)	**(13.36)**	**(14.92)**	**(13.31)**
Founder	**-0.3681*** **	-0.0066	**-0.2738** **	**-0.3915*** **
	(-3.77)	(-0.05)	**(-2.56)**	**(-3.73)**
Marketable Age	**0.1244*** **	**0.0997** **	**0.1488*** **	**0.1180*** **
	(3.09)	**(1.72)**	**(3.26)**	**(2.74)**
Business Uniqueness	0.0727	**0.2332*** **	**0.1251** **	**0.0943** **
	(1.53)	**(3.59)**	**(2.29)**	**(1.86)**
Year FE	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes
Observations	24,934	9,986	16,289	20,339
Pseudo R2	0.076	0.115	0.099	0.088

Part IA5. Governance Quality and Value-based Equity Grants: More Details

This robustness check provides more details for the results in Panel A of Table 10. In Panel A of Table A5, we control for the retention pressure score. In Panel B of Table A5, instead of focusing on the summary governance quality score, we include all five governance-related variables in this analysis.

Table A5. Governance Quality and Value-based Equity Grants: More Details

Panel A. Controlling for the Retention Pressure Score

	Dep. Var.: Value-Based Practice Dummy			
	(1)	(2)	(3)	(4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Governance Quality Score	**0.1130*** **	**0.0516***	**0.1229*** **	**0.1221*** **
	(5.90)	**(1.90)**	**(5.50)**	**(5.89)**
Retention Pressure Score	0.1823***	0.1108***	0.2217***	0.1891***
	(9.69)	(4.34)	(10.42)	(9.52)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes
Observations	24,836	9,924	17,164	20,192
Pseudo R2	0.077	0.130	0.113	0.085

Panel B – Five Proxies for Governance Quality

	Dep. Var.: Value-Based Practice Dummy			
	(1)	(2)	(3)	(4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Board Indp. Ratio	**3.1442*** **	**3.1292*** **	**3.7532*** **	**3.3850*** **
	(15.93)	**(10.34)**	**(15.52)**	**(16.05)**
Board Busy Ratio	**1.3576*** **	**1.5615*** **	**1.7553*** **	**1.3632*** **
	(14.33)	**(12.36)**	**(16.20)**	**(13.43)**
Board Coopted Ratio	0.0519	**0.3293*** **	0.0284	0.0093
	(0.75)	**(3.39)**	(0.35)	(0.13)
CEO Chair	0.0731	**0.2580*** **	**0.1071** **	**0.0839***
	(1.57)	**(4.14)**	**(2.00)**	**(1.70)**
Inst Block Ownership	**0.4026*** **	0.1678	**0.3931** **	**0.2403***
	(2.93)	(0.88)	**(2.48)**	**(1.70)**
Year FE	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes
Observations	30,968	11,758	21,527	25,067
Pseudo R2	0.068	0.096	0.102	0.076

Part IA6 Subsample Analysis On the Relationship Between Corporate Governance and Value-Based Equity Grants

It is possible that the positive effect of governance on value-based equity pay practice might only exist among firms that face high retention pressure. Under the optimal contracting view, good governance mitigates the anti-incentives of value-based equity grants and allows a firm to use them for retention purposes. Therefore, the positive effect of governance on value-based grants should be particularly strong among firms under high retention pressure. We thus split the sample into subsamples based on retention pressure and run the GMM model in the subsamples for further insight. By construction, *Retention Pressure Score* ranges between 0 and 7. We first form three subsamples with retention pressure scores of 0 to 2 in the low retention pressure subsample, 3 to 5 in the medium subsample, and 6 to 7 in the high subsample. The results using this subsample split are presented in Table A6, Columns 1-3. The coefficient on *Governance Quality Score* is insignificant in all subsamples. (The total number of observations over the three subsamples declines from Panel B of Table 10 due to the requirement of nonmissing retention pressure score.) We notice that the observations are not evenly distributed across the subsamples and the medium subsample has many more observations than the low and high subsamples. Thus, as a robustness check, we also split the sample more evenly among the subsamples by retaining only a retention pressure score of 4 in the medium subsample. The results using this alternative subsample split, presented in Columns 4-6 of Table A6, are similar to those using the original split. Overall, we do not find evidence that governance positively affects the use of value-based grants among firms facing high retention pressure.

Table A6. GMM Regression: Subsample Analysis

This table reports results from the GMM model in Panel B of Table 10 run in three subsamples: low-, medium-, and high-retention pressure firms. In Columns 1-3, a firm is a low (medium, high) retention firm if its retention pressure score is 0-2 (3-5, 6-7). In Columns 4-6, a firm is a low (medium, high) retention firm if its retention pressure score is 0-3 (4, 5-7). The dependent variable is a dummy indicating whether a firm uses a value-based practice in granting equity. AR(1) and AR(2) are tests for first-order and second-order serial correlation in the first-differenced residuals, under the null of no serial correlation. The Hansen test of over-identification is under the null that all instruments are valid. The Diff-in-Hansen test of exogeneity is under the null that instruments used for the equations in levels are exogenous. We include the same set of controls as in Table 8 that are not reported for brevity. All variables are winsorized at the 1st and 99th percentiles. *T*-statistics, reported in parentheses, are based on the robust standard errors clustered at the firm level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Dep. Var.: Any Value-Based Practice vs. Share-Based Dummy					
	(1)	(2)	(3)	(4)	(5)	(6)
	Firms With Low Retention Pressure	Firms With Medium Retention Pressure	Firms With High Retention Pressure	Firms With Low Retention Pressure	Firms With Medium Retention Pressure	Firms With High Retention Pressure
Governance Quality Score	0.0778	0.0016	-0.0246	0.0168	0.0501	-0.0914
	(0.63)	(0.05)	(-0.19)	(0.31)	(0.94)	(-1.37)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,123	13,107	1,965	5,783	5,229	6,183
AR(1) test (p-value)	0.371	0.615	0.209	0.337	0.890	0.589
AR(2) test (p-value)	0.888	0.179	0.342	0.646	0.190	0.109
Hansen test of over-identification (p-value)	0.350	0.366	0.726	0.176	0.587	0.845
Diff-in-Hansen tests of exogeneity (p-value)	0.164	0.164	0.890	0.181	0.691	0.588

Part IA7. Robustness Checks: GMM Regression Analysis of Panel B of Table 10

In this robustness check for Panel B of Table 10, instead of using 5th and 6th lags of related variables as IVs in our baseline analysis, we use 3rd and 4th lags (Panel A) or 7th and 8th lags (Panel B) of these variables as IVs in the GMM analysis. These results are reported in Table A7 below.

Table A7

Panel A. Dynamic Panel GMM Regression Analysis Based on 3rd and 4th Lags of Variables As IVs

	Dep. Var.: Value-Based Practice Dummy			
	(1)	(2)	(3)	(4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Governance Quality Score	0.0178	0.0155	0.0681	-0.1866
	(1.25)	(0.48)	(0.74)	(-1.52)
L.Value-Based Practice	0.0720	1.0755***	2.5853***	4.5878***
	(0.45)	(23.64)	(3.97)	(4.42)
L2.Value-Based Practice	0.0414**	-0.5098***	-0.1918*	-0.3551***
	(2.49)	(-14.11)	(-1.74)	(-3.53)
Controls	Yes	Yes	Yes	Yes
Observations	23,833	7,991	16,457	19,000
AR(1) test (p-value)	0.003	0.000	0.000	0.000
AR(2) test (p-value)	0.780	0.080	0.009	0.006
Hansen test of over-identification (p-value)	0.215	0.000	0.000	0.199
Diff-in-Hansen tests of exogeneity (p-value)	0.305	0.000	0.000	0.383

Panel B. Dynamic Panel GMM Regression Analysis Based on 7th and 8th Lags of Variables As IVs

	Dep. Var.: Value-Based Practice Dummy			
	(1)	(2)	(3)	(4)
Value-Based Practice =	Any Value-Based vs. Share-Based	Fixed Value vs. Share-Based	Preset Structure vs. Share-Based	Pay Tracking vs. Share-Based
Governance Quality Score	0.0362	0.1894	-0.4146	-0.3548
	(0.61)	(0.88)	(-1.02)	(-0.84)
L.Value-Based Practice	-0.0042	1.4334***	0.3803	4.8541**
	(-0.01)	(13.09)	(0.32)	(2.12)
L2.Value-Based Practice	-0.3318	-1.0174	2.0417	0.8001
	(-0.66)	(-1.64)	(0.94)	(0.41)
L3.Value-Based Practice	0.0800	0.0173	1.7764*	2.2441*
	(0.25)	(0.03)	(1.84)	(1.69)
L4.Value-Based Practice	0.5033	-0.3239	1.1459	2.3930*
	(1.20)	(-0.45)	(0.64)	(1.92)
L5.Value-Based Practice	0.1143	-0.1038	-0.0699	0.8721
	(0.51)	(-0.55)	(-0.04)	(0.49)
L6.Value-Based Practice	-0.0217	0.0439	-0.1903	-0.2610**
	(-0.76)	(0.31)	(-0.97)	(-2.26)
Controls	Yes	Yes	Yes	Yes
Observations	14,665	4,323	10,011	11,356
AR(1) test (p-value)	0.259	0.000	0.021	0.019
AR(2) test (p-value)	0.802	0.837	0.651	0.761
Hansen test of over-identification (p-value)	0.483	0.497	0.005	0.712
Diff-in-Hansen tests of exogeneity (p-value)	0.626	0.432	0.010	0.703