Complexity of CEO Compensation Packages

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Investors, the media, and academics have all voiced concerns that Chief Executive Officer (CEO) pay contracts have become so dense and detailed that those executives struggle to understand them. *The Financial Times* noted: "The way executives are paid has become overly complex, with too many cash and share-based awards, long and short-term targets and a profusion of measures of success, ranging from earnings per share to total shareholder return to return on equity" (Skapinker 2015). *The Wall Street Journal* likewise said: "the growing complexity of CEO compensation packages and the performance mismatches have spurred some investors to call for revamping executive pay in a radically simple way" (Francis and Fuhrmans 2019).[1] A 2012 study conducted by PricewaterhouseCoopers that surveyed over 1,000 executives across different countries states (on page 28)[2] that "Complex plans are a motivation killer. The idea that we can manage by incentives has led to evermore complex metrics frameworks and formulae. These have many consequences, most of them unintended. But a key one is the further reduction in value they cause in the eye of the executive." Even the 2016 Nobel Prize winner Bengt Holmstrom argues that pay plans are too complex, have become unwieldy, and should be simplified (Kerber 2016).

In this article, we develop a measure of compensation contract complexity, examine factors that may explain this complexity, and investigate the implications for firm performance.

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[1] Responding to investors' calls for simpler, more transparent metrics, Credit Suisse replaced the 28 performance metrics used to evaluate its top executives with a few measures tied to the bank's group-wide performance (Noonan 2018). Unilever similarly redesigned its executive pay, citing simplicity as one of its lodestars. Unilever's 2019 remuneration policy for CEO pay refers to simplicity as a guidance principle. See https://www.unilever.com/Images/updated-statement-on-unilevers-remuneration-policy_tcm244-530551_en.pdf

[2] See "PwC, Making Executive Pay Work: The Psychology of Incentives." Available here: https://www.pwc.com/gx/en/hr-management-services/publications/assets/making-executive-pay-work.pdf.

We define a contract as more complex when it contains more state contingencies (that is, multiple factors for the manager to consider) and is more complicated in a way that increases the CEO's cognitive load. In assessing complexity, we consider four dimensions of compensation contracts: types of compensation, the number of performance metrics used, the number of periods over which performance is measured, and the reference points for performance measures (absolute and relative). We aggregate these features into a single measure and consider a contract as more (less) complex when it contains relatively more (fewer) of these features.

Contracts (of any sort) fall along a continuum. At one end, they can be complete, in the sense that all possible contingencies have been incorporated. At the other, they can be simple and, rather than try to incorporate all future states, instead allow for ex-post renegotiation as future states present themselves. As complete contracts are often impossible (or prohibitively expensive) to write (Hart 1988), compensation contracts typically are incomplete, but they include more provisions, not fewer, because including the possibility of renegotiation weakens the contract's incentive effects. In addition to including provisions for contingencies, the Informativeness Principle (Holmstrom 1979) suggests that any measure of performance that is informative about the manager's effort *should be included* in the contract. We argue that complex contracts may contain conflicting incentives, or managers may suffer from information overload with too many measures on which to focus (Jensen 2010), leading to dysfunctional behavior that may inhibit firm performance.

Using a sample of approximately 1,700 firms from 2006–2019, we first document that complexity has, in fact, increased over time. This increase is driven by more performance measures and more periods for performance measurement, as well as the use of relative performance conditions. We document that complexity resides in the components of pay that are more heavily weighted in CEO contracts, suggesting that CEOs are exposed, in a material way, to complexity. That is, compensation contracts don't just appear complex, they are economically complex.

We find that contract complexity is associated with factors related to organizational and operational complexity of the firm and provisions used to address principal-agent problems. We also find that complexity relates to the complexity of peer firms' compensation, suggesting that contract provisions spill across the labor market. Contract theory proposes that a simpler contract that allows for renegotiation may be preferrable to an incomplete contract in a complex environment (Segal 1999). Although renegotiation is common in debt contracting, it is uncommon in incentive contracts, as the possibility of renegotiation weakens incentive effects. We find evidence that contracts are more complex in firms that have less discretion in their contracts, consistent with greater complexity being accompanied by a lower possiblity of renegotiation.

We find that complexity is associated with increased frequency of terms in Institutional Shareholder Services (ISS) guidelines. Though not causal, this last result could be interpreted as the firm's trying to secure ISS approval, given the increased discussion of performance terms and timelines in ISS guidelines. We also find that compensation contracts are more complex when firms use compensation consultants. Finally, we find mixed evidence of the association between complexity and firms' attempts to obfuscate pay.

Examining the consequences of contract complexity, we find that complex contracts are associated with lower future firm performance (measured by both accounting and stock returns). This evidence points to the potential inefficiencies that can arise from contracts that are too complex. This result also highlights unintended consequences associated with compensation contracts with too many performance metrics or provisions, which can lead to cognitive overload and less desirable outcomes. We further investigate two settings to shed further light on whether cognitive load associated with contract complexity impacts firm performance. First, we explore situations in which firms are exposed to extreme changes in industry growth and find that firms whose CEOs have more complex compensation perform worse than firms whose CEOs have less complex compensation. These results are consistent with complex contracts diffusing managerial attention and imposing cognitive costs on how CEOs think and process information when making quick decisions (Dutton and Jackson 1987). Second, we explore whether the negative association between complexity and firm performance is mitigated for firms with high correlations among the different performance metrics. We find that when the correlation between the performance metrics is high, the negative association between complexity and firm performance is weakened. This is consistent with CEOs facing lower cognitive load when performance metrics are highly congruent as the actions the CEO takes to improve on one performance measure will end up improving associated measures.

Overall, our article shows that the unintended consequences of complexity confirm concerns raised by investors and the media, and our findings may be useful to boards as they design CEO pay packages.