

Portfolio Impact of External Hiring

Carrie Green
Tennessee Consolidated Retirement System
Carrie.Green@tn.gov
Nashville, TN 37243, U.S.A.

Gregory L. Nagel*
Middle Tennessee State University
Greg.Nagel@mtsu.edu
Murfreesboro, TN 37132, U.S.A.

Philip A. Seagraves
Middle Tennessee State University
Philip.Seagraves@mtsu.edu
Murfreesboro, TN 37132, U.S.A.

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ABSTRACT

Currently, rational boards will hire talent externally rather than promoting from within if the expected gain *for the firm* is greater. However, collectively, institutions are now the majority owners of nearly all large firms in the economy. We find that optimal CEO hiring decisions at the individual firm level can lead to *reduced* wealth for investors that hold a broad portfolio of investments. We use a proven economic model to show that these institutional investment portfolios bear costs imposed on other firms in the portfolio when one of the firms hires externally. The model shows that the total unrecognized cost imposed on a representative portfolio is about 22% of its market value. Empirical tests on this economic model, forced turnovers, and highly credentialed CEOs, along with a broad review of the literature, shows no evidence that any of the imposed costs are materially mitigated by the value top executive external hires add at the firms they join. We provide new corporate governance recommendations for institutions seeking to reduce these imposed costs; our primary focus is on effective succession planning.

KEY WORDS: Portfolio, Institution; Investor; External Hire, Executive

INTRODUCTION

In recent decades, external hiring has become widely accepted as an empirically supported way to create value when hiring top executives at an individual firm. Murphy and Zabojnik (2004) show that since the late 1970s U.S. boards have increasingly hired executive talent externally, and Nickisch (2016) shows external hiring is significant in the United States and Western Europe and on the rise globally. The accepted method to estimate the costs and benefits of external hiring is to compare the performance of externally hired executives to the performance of internally promoted executives at a firm; see, for example, Huson, Malatesta, and Parrino (2004). At the same time, when one firm hires talent, another firm loses it. With institutional investment portfolios holding more than 50% of public firm value (Grinstein and Michaely (2005)) and a substantial portion of private firm value, institutional interest is in

determining the net gain at the portfolio level. Therefore, the gain at the hiring firm as well as the associated losses at other firms are of interest to institutions. This contrasts with rational board behaviors when firm owners own a small number of stocks and need not consider losses they precipitate at other firms. To maximize value for institutional owners in external hiring decisions, boards would need to account for not only the impact on their firm, but also the costs imposed on institutions' portfolios, as depicted in Figure 1, including:

1. Reduced performance and lost future value at the hire's prior firm due to loss of their intellectual capital,
2. Owners' lost bargaining power for rights to cash flows because external hiring reduces all owners' bargaining power,
3. Reduced performance by executives engaging search firms for career advancement rather than keeping their focus on their current firm's performance as a means of advancement, and
4. Excessive risk taking by executives wishing to attract external job offers at higher pay.

Insert Exhibit 1 here

We aim to determine whether institutions' investment portfolios experience a positive net effect from external hiring versus internal talent development by considering these costs incurred in the rest of the portfolio along with the usual expected benefits at the hiring firm. Without considering these imposed costs, board behavior that is intended to maximize value for shareholders could actually be destroying value for the majority shareholders of firms today.

To estimate two of the four costs imposed on all portfolio firms due to hiring managers externally, we use an economic model suited to this purpose; it is provided in Lustig, Syverson, and Van Nieuwerburgh (2011) (LSVN). The model estimates the cumulative impact on our sample portfolio to be 22% (~0.5 percentage points in return per year) of the portfolio's value. We check the output of the model by evaluating the costs empirically and with professionals.

Finally, using empirical analysis and a broad review of professional and academic sources, we identify whether a portfolio is likely to realize a net benefit when accounting for the possible net benefit to the firm, and then specifically for typical situations such as forced turnovers and when hiring highly credentialed executives.

We find the benefits to the hiring firm are not expected to overcome the costs imposed on other portfolio firms except in the case of external hires at small firms, where there is often little depth of talent. Our analysis does not address startup firms, for which there is no data, or unusual CEO appointments such as spinoffs. Our research extends a developing line of literature on firms commonly owned by the same set of investors (Anton et al. (2017); He and Huang (2017)). Based on our findings, we provide new corporate governance recommendations for institutions seeking to reduce the above four costs by enhancing the succession process and talent pipeline.

IDENTIFYING THE COSTS TO OTHER FIRMS

First, when an executive is hired away, a portion of their intellectual capital is lost at their prior firm, which negatively impacts its value. Further, we assume a firm hires externally to obtain the best talent available in the market, which implies someone of lesser talent will fill his/her spot at the prior firm. Empirical evidence shows that losing the intellectual capital of

talented top executives impacts firm value. For example, Salas (2010) shows that the sudden death of non-entrenched top executives results in a 1.8 percentage point loss of firm value relative to the market. Non-entrenched executives are about 90% of Salas' sample; therefore many non-entrenched executives perform below the market average. The loss of talent from the top 25% of performers, who would be more suitable to be externally hired, would result in a greater loss of value, ~ 7%.¹ This figure does not count the loss common to all firms due to talent loss; this loss should also be accounted for in the analysis.

To visualize the common cost shared by all firms, consider a simplified market comprised of only two firms that do no succession planning and rationally hire executive talent externally to maximize their firm's value. Each firm hires from the other, so each suffers loss of intellectual capital. Each firm's value is reduced due to loss of talent; this is a common loss in value experienced by both firms. In a unique situation Faleye (2015) is able to identify the total loss in operating performance due to loss of intellectual capital; it is more than 12 percentage points in operating income return on assets; details are discussed in a later section, where we also use LSVN's full equilibrium model to identify the total value loss for all firms.

Second, when an executive is hired externally, the institutional owner's bargaining power at all other firms is reduced. This is demonstrated by a firm's response to the departure or threat of departure of an executive. Gao, Luo, and Tang (2015) show that after a top executive is hired by another firm, the remaining executives' compensation increases about 32% on average. More broadly, most firms report in proxy statements that they set executive pay to ensure retention of their executives; the threat of losing talent leads to broad pay increases (Bizjak, Lemmon, and

¹ Salas defines entrenched executive as having negative alpha (using the market model) stock performance over the prior three years and a tenure exceeding 10 years. Approximately 10% of Salas' sample is entrenched; ~90% are not. If we focus on the upper quartile likely to be desirable external hires and extrapolate Salas's data, the loss is ~7%.

Naveen (2008)). Obviously, top executive pay reflects the current market clearing price; however, we investigate whether this price is justified by value creation for institutional owners.

Third, compared to internal hires, Allgood and Farrell (2003) show external CEO hires have a greater risk of being terminated. Executives prepare for this risk by engaging search firms. In truth, “Executives often see search firms as a primary vehicle for their career advancement”.² This norm imposes a cost on all firms as more executives pursue career advancement by looking to search firms rather than by maximizing long-term value for their current firm’s owners.

Finally, to attract higher-paying job offers from external firms that might hire them, some executives take excessive risks at their current firm, which creates negative externalities. For firms in general, Narayanan (1985) finds executives can have incentives to enhance their reputation at shareholders’ expense. Their objective is greater pay, perhaps through external job offers. Further, Thanassoulis (2012) shows that for 10% of banks, competition for talent has driven pay to be 80% of shareholders equity; he points out, “These are huge payments that can potentially make the difference between investors having and losing confidence in a bank” (p. 851). This level of labor market competition for a bank’s executives increases default risk at all rival firms, so much so that the European Union has capped bankers’ pay and the United States has proposed regulation of bankers’ pay. Based on this evidence and warnings in Rajan (2005), Acharya, Pagano, and Volpin (2016) (APV) develop a model showing that default risk at other firms can increase and discovery of true talent is slowed due to external hiring.

² This quote dated April 2, 2018 is from David Lord, founder of the Executive Search Information Exchange for Fortune 500 size firms and entities such as the Gates Foundation; this email is available upon request.

The above costs, and possibly more, are all attributable to external hiring of executives (rather than internal hiring), and they are imposed on other firms held in a diversified institutional investment portfolio.

ESTIMATION OF TWO PORTFOLIO COSTS

We now estimate the costs imposed by external hiring on a sample institutional investment portfolio. The LSVN model captures two of these imposed costs: lost intellectual capital and executives' increased bargaining power for pay increases. Their full equilibrium model estimates total portfolio value over three decades as a function of the portability of managerial talent from firm to firm through external hiring, which LSVN call skill portability. LSVN model non-financial firms headquartered in the United States; we assume LSVN's model applies to other countries as well as financial firms.³ LSVN's model matches nearly all features of U.S. data for non-financial firms (e.g., pay, pay distribution, firm exit rates, increased pay to performance, the correlation of pay dispersion to firm value) since the 1960s. In addition, the model matches key features of U.S. non-financial firms' data in out-of-sample tests such as the cross sectional correlation between firm valuation and wage dispersion. The LSVN model shows results for two cases centered on external hiring that are of primary interest:

- The observed level of external hiring through time since the 1960s (this corresponds to a skill portability parameter value of 50% in the model), and

³ LSVN model non-financial firms. As there is no similar model for financial firms, we apply LSVN's model to all firms including financial firms. This misses the cost of excessive risk taking in the banking industry leading up to the 2008 financial crisis; we briefly discuss this cost in the verification of costs section.

- When there is no external hiring because managerial skills are not portable.

In each case, our interest centers on the impact of external hiring on the market-to-book value of all firms in the economy which LSVN report using a popular measure called Tobin's Q. Tobin's Q is the market value of all assets divided by the replacement value of all assets. Often the replacement value of assets is approximated by their book value, which gives us market-to-book.

Intuitively, the value of an institution's investment portfolio will increase if executives are not jumping from firm to firm and succession planning is effective. These executives' intellectual capital will be retained and their pay will not increase on average. While not common today, this circumstance describes executive labor markets from 1945 to 1975, when firms' sizes increased rapidly and the value-weighted inflation-adjusted U.S. stock market increased by more than 1,800%, yet inflation-adjusted top-three executives' pay remained flat (see Frydman and Saks (2010)).

We use the portfolios of the members of the Council of Institutional Investors (CII) as a representative portfolio. As of November, 2018, CII members owned about \$29 trillion in aggregate portfolio value; see <https://www.cii.org/members>. Due to the large, diversified nature of each member's portfolio, we assume nearly all major firms are in the aggregation of the CII members' portfolios.

To begin the calculation, we note that the LSVN model aggregates corporate value (all equity and debt) and that the CII members' portfolios holds non-corporate assets such as cash. To estimate the value of non-corporate assets in the portfolios, we surveyed three large members: Florida State Board of Administration, Washington State Investment Board, and Los Angeles County Employees Retirement Association. Each of these three members holds non-corporate

assets between 72% and 80% of their portfolio⁴. We assume the average member's portfolio value is made up of 76% corporate assets that are affected by executive skill portability/external hiring. This value is reported in the column of Exhibit 1, labeled *\$ Portion of portfolio affected by skill portability*. Row A provides the current value of the CII members' portfolios. Row B provides the value of the portfolios with no executive skill portability (no external hiring). The difference between the two shows the cost imposed on the CII member's portfolios due to lost intellectual capital and lost bargaining power: \$6.21 trillion, approximately 22% of the value of the total portfolio value since the early 1980s, with a yearly portfolio effect of approximately 0.5%.

Insert Exhibit 2 here.

VERIFICATION OF THE PORTFOLIO COST

We now use empirics and professional insights to corroborate the model-estimated cost imposed on the representative portfolio in the cost categories we identified.

The cost of labor market demand for top executives

LSVN's model shows no increase in executive pay with increasing firm size if skills are not portable. Determining the market value lost due to increased labor market demand on

⁴ Percentages are calculated from the Statement of Net Asset Position in the 2017 financial reports for each institution, with further clarification provided by the institutions.

executive pay requires several inputs: (1) total compensation, (2) the real rate of its growth, (3) the nominal rate of its growth, and (4) the discount rate.

To start, we obtain ex ante compensation of the top five executives at S&P 1500 firms each year. We aggregate this data to include all public S&P 1500-size firms (i.e., firms with total assets greater than \$200 million).⁵ This results in an estimated aggregate compensation of \$55.2 billion for top five officer pay at all public U.S. firms with more than \$200 million in total assets. These firms comprise 99.6% of the total corporate value of public firms in the United States, and are therefore used to approximate the entire market. Using S&P 1500 top five executives' compensation for the period 2003 to 2016, we find pay has increased at a real rate of 1.35% and a nominal rate of 3.41% annually. Finally, LSVN show that the real weighted average cost of capital for the aggregate of U.S. corporations is 5.5% (p. 625). Using Gordon's formula to calculate the present value of all future compensation payments, we find the market value impact of top five executive pay for all U.S. public firms in 2018 is \$1.47 trillion.⁶

As large institutional investment portfolios hold not only U.S.-based public firms, but also private and international firms, we must continue to aggregate this number.⁷ Of the 76% of our sample portfolios that hold corporate assets, approximately 60% are public firms and 15% are private firms. When including the private firms in this analysis, the market value impact

⁵ Total ex ante compensation (variable TDC1) from ExecuComp for firms' top five officers is used to estimate top five officers' pay at firms in the S&P 1500 Index each year as a function of firm sales, industry, and membership in the S&P 500. This regression equation is then used to estimate the pay of top five officers for all U.S. S&P 1500-sized public firms. Pay estimates less than zero are set to zero. The resulting estimate of aggregated top five officer pay for all U.S. S&P 1500-size public firms is \$55.0 billion in 2016. Using Compustat data we estimate that S&P 1500-size companies comprise 99.6% of all public corporate value (debt and equity) in the United States. Therefore, it can be estimated that top five officer compensation at all public U.S. firms is \$55.2 billion.

⁶ Gordon's formula for a growing perpetuity as of 2018 = cash flow in 2019 / (real weighted average cost of capital – real growth rate of the cash flow) = \$55.2 billion * (1.0341)³ / (0.055 – 0.0135) = \$1.47 trillion.

⁷ For public equity value, see <https://seekingalpha.com/article/4058359-u-s-quickly-losing-share-world-market-cap>. For the United States' share of corporate debt, see <http://investorfactbook.spglobal.com/sp-global-ratings/global-corporate-debt-maturities-through-2021/>.

increases to \$1.84 trillion.⁸ The final step of including non-U.S. firms, which comprise 64% of global public corporate value, results in a total market value impact of \$5.10 trillion (\$1.84 trillion / 0.36).

Given the impossibility of identifying the exact holdings of every institution, we do not know the precise portfolio impact for the sample portfolio. We know all institutions own about half of public firms' equity in the United States and we know the CII owns only a portion of these institutional equities. Assuming CII's portion is 23%,⁹ the average impact of increased top 5 executive pay since the mid-1970s on CII's investment portfolio is a loss of approximately \$0.7 trillion in market value.¹⁰ Thus the major ongoing cost is lost intellectual capital.

The cost of lost intellectual capital

A well-documented case by Faleye (2015) illustrates the cost of developing human capital for internally promoted CEOs with and without prior board experience. Faleye (2015) investigates whether “board-level strategy discussions provides valuable training for top managers so that a CEO appointee without such exposure potentially faces a significantly steeper learning curve as the firm's top executive” (p. 12). Compared to CEO appointees without exposure, Faleye finds that internally promoted CEOs with prior board experience increase operating income return on assets (OROA) by 12.56 percentage points (p -value < 0.05), and

⁸ \$1.83750 trillion = \$1.47 trillion + (15% / 60%) * \$1.47 trillion

⁹ Intelligence on European Pensions and Institutional Investment estimates that as of December 2017, the top 400 asset managers globally have \$78.9 trillion in assets under management (AUM). Willis Towers Watson estimates AUM for global pensions as of the same date to be \$44.9 trillion. CII's AUM of \$29 trillion is approximately 23% of these combined figures.

¹⁰ \$0.71 trillion = \$6.21 trillion * 0.5 * 0.23.

more so with increased years of prior board experience (p -value < 0.01).¹¹ For example, assume CEOs without prior experience have an ORAO of -3.0%; then those with would have an OROA of 9.56%. Firm value (measured by Tobin's Q) also improves strongly (p -value < 0.01) as a function of prior board experience. These performance improvements are only observed during the first two years of internally promoted CEOs' tenure if they have prior board experience. Faleye's various tests suggest these performance improvements are caused by the intellectual capital that internally promoted CEOs gain from prior experience on their respective firm's board. External hiring can take away these economically important gains from the portfolio firms providing talent to other firms, unless they have effective succession plans, which is not commonly the case (Harrell (2016)). Finally, as was previously mentioned, Salas (2010) shows the sudden loss of talented top executives significantly reduces firms' market value.

Professional insights support the importance of human capital development to value creation at the firm. A senior executive explains:¹²

“You are ultimately quantifying the value of human capital. Most boards spend a lot of time on financial performance, investments, and strategy but substantially less on talent management. Yet most experienced leaders would agree that talent is the dominant factor in driving results.”

The cost of executive engagement with search firms

¹¹ Faleye (2015) rigorously tests for and finds no evidence to support a reverse causality explanation or any other non-causal explanation, such as selection bias, for his results. A detailed explanation is available on request.

¹² Jeff Nagel was the vice president and general manager of the Global Services division of General Electric Oil & Gas. He then went on to become CEO of NBTY, a leading global manufacturer and marketer of supplements.

David Lord, founder of the Executive Search Information Exchange, observed that:

- Many executives primarily look to search firms for their career advancement.
- Some directors on public firm boards call in search firms as a cover to attract better jobs for themselves through the search firm at owners' expense. Some of these directors are junior executives at other firms.

Anecdotally, a few externally hired CEOs admit that they include search firms in nearly all of their top executive searches as a means of quickly obtaining future jobs through the search firm for themselves. Lord's second observation is substantiated by evidence in Nagel (2015). Nagel finds that job opportunities for outside directors of underperforming public firms sharply increase during the turnover year, but only if the board hires a CEO externally. Not surprisingly, these external hires underperform inside hires, and more so for institutions once imposed costs are counted. The outcome for private firms could be more positive if directors' incentives are more aligned with owners'. Overall, our limited evidence suggests that some top executives, especially those hired externally, use search firms as a means of advancing their careers at the owners' expense, while imposing costs on other portfolio firms as discussed previously.

The cost of excessive risk taking

Not included in the model's estimate is the cost of negative externalities driven by executives' desire to be hired externally. As was previously discussed, some of these effects were observed

in the banking industry leading up to the 2008 global financial crisis; see Acharya, Pagano, and Volpin (2016), Thanassoulis (2012), and Rajan (2005).

RESEARCH REVIEW OF EXTERNALLY HIRED EXECUTIVE VALUE CREATION

We now investigate published evidence to determine whether the value added at the firms that hire externally exceeds the costs they impose on all other firms in the portfolio. Unless stated otherwise, the evidence cited is for S&P 1500-size firms.

The empirical evidence primarily focuses on internal and external CEO performance. Published evidence from professionals and academics on CEOs' performance is of two types: direct and indirect. Due to well-known concerns with ambiguous interpretations and spurious correlations, we focus on direct evidence of internally and externally hired CEOs' performance. Though our survey covers the entire Financial Times list of credible sources,¹³ the few papers offering direct evidence of inside and outside CEOs' performance at a firm are easily summarized.

The landmark study in finance by Huson, Malatesta, and Parrino (2004) (HMP) addresses only the operating performance of CEOs. HMP find no significant gain or loss to hiring a new CEO externally versus internally. An accepted interpretation of HMP's result is that firms hire from the source offering the needed skills, so no performance difference is observed on average;

¹³ The survey includes all relevant sources on the Financial Times' list of citable sources. The relevant sources are in the areas of management, economics, and finance: *Academy of Management Journal* (1963-2008), *Academy of Management Perspectives* (1987-2013), *Academy of Management Review* (1976-2008), *Administrative Science Quarterly* (1956-2010), *California Management Review* (1958-2014), *Harvard Business Review* (1956-2014), *Human Resource Management* (1961-2014), *Journal of Management Studies* (1997-2014), *Management Science* (1954-2008), *Strategic Management Journal* (1980-2014), *American Economic Review* (1911-2014), *Quarterly Journal of Economics* (1969-2013), *RAND Journal of Economics* (1984-2014), *Journal of Finance* (1946-2014), *Journal of Financial and Quantitative Analysis* (1966-2014), *Journal of Financial Economics* (1995-2014), and *the Review of Financial Studies* (1988-2014).

see Demsetz and Lehn (1985) and Edmans, Gabaix, and Jenter (2017). In other words, firms that hired externally would have had lower performance had they hired internally and vice versa. To provide evidence of overall portfolio gains when a firm hires a CEO externally, HMP would have needed to find that external hires outperform internal hires by enough to cover the loss to the firm providing the talent.¹⁴ They did not, which is consistent with the current focus on hiring externally if the benefits outweigh the costs *only considering the hiring firm*.

A survey by Nagel (2014) of the Financial Times' credible sources reviews inside and outside hires' direct performance. Excluding HMP's research, this survey finds that firms experience a loss on average when hiring a new CEO externally. HMP do not include non-operating costs such as those for restructuring. The remaining sources' performance measures include both operating and non-operating impacts on firm performance. The landmark study showing that externally hired CEOs underperform is Khurana (2002); a summary is provided by Zhang and Rajagopalan (2010).

Representing smaller firms, Ford, Lowe, and Huerta (2018) study external versus internal CEO performance in 2005 using a sample of 1,640 CEO turnovers at U.S. hospitals. Almost all are private hospitals smaller than the first percentile of S&P 1500 firms.¹⁵ Ford et al. conclude external CEO hires outperform internal CEO hires. This finding is consistent with views held by professionals in small organizations, who report that they must hire externally because their internal depth of talent is limited.¹⁶

¹⁴ The academic and professional focus is on maximizing the value of the firm. To maximize the value of a portfolio, the costs imposed on other firms in the portfolio must be considered before an executive is hired externally. To account for the imposed cost on other portfolio firms, a firm's gain from hiring externally must significantly exceed its gain from promoting internally.

¹⁵ A random sample of 100 hospitals in the dataset used by Ford, Lowe, and Huerta (2018) shows the median net Plant, Property, and Equipment in 2010 is \$16 million.

¹⁶ We obtained this insight from Doug Tatum, former Chairman of the Board for the Association of Corporate Growth, a global not-for-profit organization. Doug Tatum is also on the board of numerous startups and is part owner of a number of startup firms.

Overall, published direct tests of performance show no evidence that the value gained at the firm by hiring externally offsets any of the costs imposed on a diverse institutional investment portfolio. The above academic results are corroborated by professionals; see Charan, Drotter, and Noel (2011) and Fernandez-Araoz (2014).¹⁷ There is evidence that hiring a CEO externally at small firms (less than \$200 million market value) could increase portfolio value for the portion of the portfolio made up of these small firms. As this is a very small portion (less than 0.4%) of corporate value, this small positive contribution does not materially affect the negative contribution from the remaining firms in the portfolio.

EMPIRICAL EVIDENCE FROM TWO EXTREME CASES

We now consider two extreme cases to test for the possibility that institutional investors may gain portfolio value in select situations involving externally hired CEOs. For these analyses we use the combined measure of newly appointed CEOs' credentials reported in Falato, Li, and Milbourn (2015). Firm variables are obtained from the Compustat database. Stock returns are obtained from CRSP. We use the CEO appointment date, source of hire, CEO age, and forced turnover indicator reported in Jenter and Kanaan (2015); CEO appointment dates are checked with the appointment dates stated in the firms' SEC Proxy statements.

The first case we consider is firms that hire a CEO externally following a forced turnover. It is well established by event studies that the market expects externally hired CEOs to outperform insiders following a forced turnover; see Parrino, Sias, and Starks (2003). Further,

¹⁷ Citrin and Ogden (2010) report that external hires outperform internal hires. We replicated their analysis. After accounting for industry performance and other factors beyond a CEO's control, external CEO hires no longer showed a performance gain. We thank Jim Citrin for his help in analyzing his data.

Falato, Li, and Milbourn (2015) provide indirect evidence (for example, higher pay and a higher external hire rate) implying that highly credentialed CEOs deliver extraordinary value when hired externally following a forced turnover. In Exhibit 3 we investigate this situation using two performance measures:

- Net income return on assets (ROA), which includes all operating and non-operating aspects of CEO performance, and
- Operating income ROA, which by definition does not include any non-operating aspects of performance such as the cost of discontinuing operations and reorganization.

As can be seen in the row labeled *Credentials_{t-1} * ExternalHire*, highly credentialed externally hired CEOs do not perform significantly better than inside hires following a forced turnover, using either performance measure. Jenter and Kanaan (2015) provide a possible explanation for this result: boards fire CEOs for factors beyond their control. Professionals corroborate that boards sometimes make “intemperate” decisions to oust a chief executive; see Sonnenfeld, Kusin, and Walton (2013, p. 10).

Insert Exhibit 3 here.

The second extreme case is the group of all externally hired CEOs that are highly credentialed. Credentials include press reports, fast track career, and education. Exhibit 4 shows our results. In the first row we again see that externally hired CEOs underperform internally hired CEOs when measured by operating and non-operating performance; see the column labeled

Net Income ROA. Replicating HMP's results, external hires still do not produce gain when non-operating costs are excluded; see the column labeled *Operating Income ROA* where the coefficient is -0.0145 . The second row shows the result for all highly credentialed CEOs.¹⁸ The third row shows our results for highly credentialed CEOs who are externally hired. Using the Net Income ROA performance measure, the most highly credentialed external hires perform no better than internally promoted CEOs. Using the Operating Income ROA measure, we find weak evidence (coefficient 0.0462 ; p -value $< 10\%$) that the most highly credentialed CEOs outperform internally promoted CEOs. The last column shows that if boards ensure there are promotable employee directors, the potential benefit of highly credentialed externally hired CEOs becomes insignificant. Our results corroborate with Faleye (2015), who suggests inside hires need significant prior experience with the board to be immediately effective.

Insert Exhibit 4 here.

Overall, we find no evidence that externally hired CEOs perform significantly better than inside hires, except for the most highly credentialed CEOs; even this evidence is weak (p -value $< 10\%$) and excludes non-operating performance.

¹⁸ Falato, Li, and Milbourn (2015) (FLM) find that highly credentialed CEOs outperform in the first three years after their "appointment;" we do not. Our detailed analysis is available on request. The two main reasons we do not replicate FLM follow: First, we are using the CEO data of Jenter and Kanaan (2015). Their data excludes spinoffs, co-CEO appointments, CEOs who simultaneously lead multiple firms, and situations where the CEO is difficult to identify. Second, we use the date of the CEO appointment given in proxy statements to determine which CEOs to include in our sample period. Analysis of FLM's data shows their assigned CEO appointment date is sometimes many years after the date given in the proxy statement. Finally, it is possible we do not replicate FLM's results because our CEO data from Dirk Jenter ends in 2001, whereas FLM's sample ends in 2005.

CORPORATE GOVERNANCE RECOMMENDATIONS FOR INSTITUTIONS AND DIRECTORS

Considering our analyses and the published literature on S&P 1500-size firms, we find no evidence that hiring top executives externally can create enough value to mitigate the costs imposed on an institutional investment portfolio. It is up to institutions to relay these findings to corporate boards and encourage a change in hiring practices that ultimately creates more value for portfolios.

The CII enhances the value of members' portfolios through "their proxy votes, shareowner resolutions ... where necessary to effect change;" see https://www.cii.org/cii_history. Our focus is on improving corporate governance by enhancing the effectiveness of succession planning, which not only avoids the costs of lost intellectual capital and lost bargaining power, but also creates value at the firm, as shown by Faleye. We recommend that any organized group of institutional investors:

- Prioritize voting for directors who show tangible evidence of developing superior executive talent at S&P 1500-size firms.
- Prioritize electing at least one employee director to the board other than the CEO. Support is provided in Faleye (2015).
- Track directors' motivations and their firms' outcomes when directors recommend external hires, then vote on directors accordingly in subsequent years. Directors can have agency problems when choosing between an insider and an externally hired CEO.

Potential agency problems are discussed in Sonnenfeld, Kusun, and Walton (2013) and Nagel (2015).

- Recognize that the size of the firm matters. For extremely small firms, externally hired top executives may indeed add value to institutions' investment portfolios.

Further, we recommend that best practices for boards include:

- Provide opportunities for directors and top executives who show tangible evidence of developing superior executive talent.
- Consult with objective professionals for advice on succession planning. For example, Fernandez-Araoz (2014) relates success in developing and retaining internal talent while increasing firm performance.

Following the above recommendations can produce a positive net portfolio impact by reducing costs imposed on institutions resulting from the external hiring process. An additional benefit may be achieved once institutions ensure internal talent is consistently developed and then promoted, should firms be able to replicate the increase in bargaining power in executive compensation negotiations shown in Feinberg (2010).

CONCLUSIONS

Our results suggest that, even though individual firms may benefit, external hiring of top executives has imposed a cost of approximately \$6.2 trillion on a representative institutional

investment portfolio and continues to produce an ongoing drag on investment returns. Given that institutions own the majority of these firms, boards must recognize the portfolio impact of external hiring decisions. We find no evidence that this cost is recouped by the value these external hires add to the firms that hire them. Directors focused on maximizing owners' value need to include these imposed costs when considering internal or external hiring, development of internal talent, and succession planning. We provide practical corporate governance recommendations for institutions that wish to collaborate on reducing the costs imposed on their portfolios by external hiring of top executives. We expect these recommendations will improve internal talent pipelines, reducing the demand for externally hired top executives. This will drive much of the demand for external talent to the lower ranks where costs are low. Further, we encourage future research that focuses on portfolio value maximization in all corporate decisions.

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Exhibit 1: Costs and benefits of hiring externally

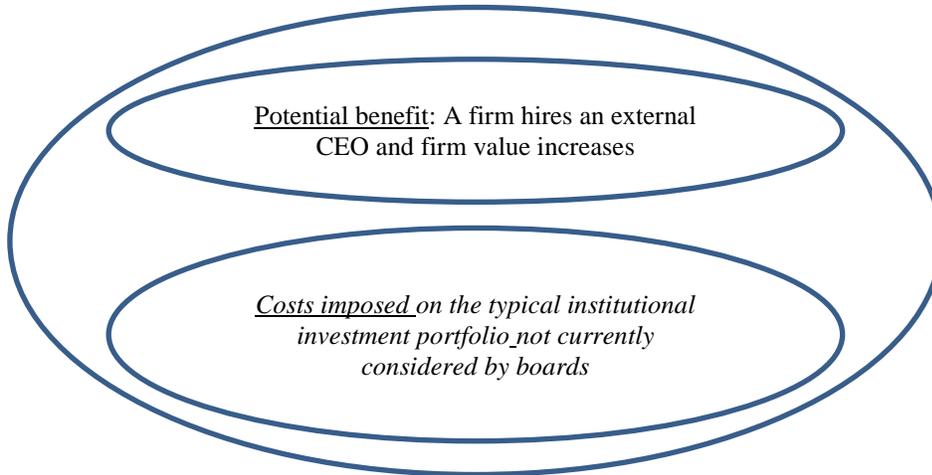


Exhibit 1: Costs and benefits of hiring executives externally for firms in the Council of Institutional Investors' portfolio. For a value analysis of lost intellectual capital, see Lustig, Syverson, and Van Nieuwerburgh (2011).

Exhibit 2: The total cost of labor market demand for the CII portfolio

	\$ Portion of CII affected by skill portability (\$ trillions)	\$ Portion not affected by skill portability (\$ trillions)	Total \$ value of CII portfolio (\$ trillions)
(A) Value of CII portfolio with current external hiring rates and skill portability (\$ trillion)	21.66	6.84	28.50
(B) Value of CII portfolio with 0% portability of skills (\$ trillion)	27.87	6.84	34.71
Cost imposed on the CII by externally hiring executives = (B) – (A)			6.21

CII is the Council of Institutional Investors; its portfolio value is \$28.5 trillion; see <https://www.cii.org/members>. The model of Lustig, Syverson, & Van Nieuwerburgh (2011) (LSVN) captures the effect of labor markets on the value of stocks and corporate bonds; we assume these securities are 76% of CII's portfolio. The steady state Tobin's Q (market-to-book value of all assets) for no (0%) portability of skills (i.e., no external hiring) is 2.11; see LSVN, Table 7, row *After*. The steady state Tobin's Q assuming the level (50%) of skill portability that best fits the data is 1.64; see LSVN, Table 4, row *After*. The \$ portion of the CII portfolio affected by labor market demand at 0% skill portability = $21.66 * [1 + (2.11 - 1.64) / 1.64]$.

Exhibit 3: CEO performance following forced turnovers

	Dependent variable	
	Net Income ROA	Operating Income ROA
ExternalHire	-0.0729 (-0.84)	-0.0106 (-0.17)
Credentials_{t-1}	-0.0248 (-0.35)	0.0356 (0.52)
Credentials_{t-1} * ExternalHire	0.1130 (0.84)	0.0722 (0.65)
Average performance in the 3 years prior to hire	-0.3920** (-2.45)	-0.3516*** (-3.37)
Standard deviation of stock returns_{t-1}	0.0460 (0.12)	0.3801 (0.97)
Log(total assets)_{t-1}	-0.0007 (-0.05)	0.0022 (0.16)
Leverage_{t-1}	0.0656 (0.61)	0.0714 (0.66)
Capital Expenditures_{t-1}	-0.6142* (-1.90)	0.0062 (0.02)
SalesGrowth_{t-1}	0.0202 (0.28)	-0.0389 (-0.64)
Research & Development_{t-1}	0.0381 (0.11)	-0.8287* (-1.93)
% Institutional ownership_{t-1}	-0.0006 (-0.64)	0.0003 (0.45)
CEO age_{t-1}	0.0006 (0.30)	-0.0003 (-0.13)
Intercept	0.0554 (0.31)	0.0317 (0.18)
Fama-French 49 industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Sample size	123	122
Adjusted R-squared	0.102	0.076

This exhibit reports OLS regressions of newly appointed CEOs' performance following forced turnovers in the 1993 to 2001 period. To identify forced turnovers, we use the data of Jenter and Kanaan (2015) who follow the Parrino (1997) classification of turnovers into forced and voluntary. The dependent variables are changes in industry adjusted performance, which are calculated as the average value of the performance variable in the three years after the year of the appointment minus the performance the year before appointment. *ROA* is return on assets. *ExternalHire* is an indicator variable set to 1 for an external CEO hire; 0 otherwise. All of the remaining variables are controls measured in the year prior to the CEO appointment. *Credentials* is the combined measure of CEO credentials described in Falato, Li, and Milbourn (2015) on page 7; they call their measure the "CEO Talent Factor." Credentials include press reports, fast track career, and education. *Average performance in the 3 years prior to hire* is the average of the dependent performance variable prior to the CEO hire; it controls for regression to the mean. Standard deviation of stock returns is calculated using monthly stock returns; it captures risk. *Log(total assets)* captures firm size. *Leverage* = (long term debt + short term debt) / total assets. *SalesGrowth* = Sales_t / Sales_{t-1}. *Research & Development* is set to 0 if the value is missing. *% Institutional Ownership* is the % of a firm's shares held by institutions. *T*-statistics are provided in parenthesis. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. When computing significance we account for clustering.

Exhibit 4: Performance for highly credentialed CEOs

Dependent variable:	Net Income		
	ROA	Operating Income ROA	
	Sample:	All inside & outside hires	All inside & outside hires
ExternalHire	-0.0490** (-2.51)	-0.0145 (-1.23)	-0.0128 (-1.04)
Credentials_{t-1}	-0.0173 (-1.07)	-0.0088 (-0.83)	-0.0057 (-0.43)
Credentials_{t-1} * ExternalHire	0.0562 (1.51)	0.0462* (1.86)	0.0390 (1.43)
Average performance in the 3 years prior to hire	-1.2032*** (-5.29)	-0.2480*** (-6.06)	-0.2653*** (-5.67)
Standard deviation of stock returns _{t-1}	-0.5034*** (-2.80)	0.0785 (0.90)	0.0350 (0.35)
Log(total assets)_{t-1}	0.0002 (0.07)	-0.0010 (-0.48)	-0.0008 (-0.44)
Forced_TO_{t-1}	-0.0024 (-0.16)	-0.0176 (-1.64)	-0.0138 (-1.23)
Leverage_{t-1}	-0.0719* (-1.65)	0.0564*** (2.82)	0.0550** (2.52)
Capital Expenditures_{t-1}	0.1052 (1.16)	-0.0051 (-0.07)	0.0210 (0.25)
SalesGrowth_{t-1}	0.0707* (1.82)	-0.0546*** (-7.40)	-0.0563*** (-5.46)
Research & Development_{t-1}	-0.2942 (-1.22)	-0.2360 (-1.64)	-0.1803* (-1.82)
% Institutional ownership_{t-1}	-0.0002 (-0.81)	0.0002 (0.97)	0.0003* (1.91)
CEO age_{t-1}	-0.0009 (-1.26)	-0.0011** (-2.26)	-0.0012** (-2.38)
Intercept	0.1635*** (2.70)	0.1115** (2.48)	0.1169** (2.34)
Fama-French 49 industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Sample size	840	826	660
Adjusted R-squared	0.676	0.196	0.207

This exhibit reports OLS regressions of all newly appointed CEOs' performance following turnovers in the 1993 to 2001 period. All performance and control variables are described in Exhibit 3. *T*-statistics are provided in parenthesis. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. When computing significance we account for clustering.