NBER WORKING PAPER SERIES

SHAPED BY BOOMS AND BUSTS: HOW THE ECONOMY IMPACTS CEO CAREERS AND MANAGEMENT STYLE

Antoinette Schoar
Luo Zuo

Working Paper 17590
http://www.nber.org/papers/w17590

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
November 2011

We thank seminar participants at the MIT Organizational Economics Lunch and the NBER Corporate Finance Meetings for helpful comments. We also thank Jess Cornaggia, Randall Morck, Sendhil Mullainathan, and Morten Sorensen for insightful comments. We are grateful for financial support from MIT Sloan School of Management. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2011 by Antoinette Schoar and Luo Zuo. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Shaped by Booms and Busts: How the Economy Impacts CEO Careers and Management Style
Antoinette Schoar and Luo Zuo
NBER Working Paper No. 17590
November 2011, Revised January 2012, Revised February 2012
JEL No. D21,D23,G3,G31,G32

ABSTRACT

This paper examines how early career experiences affect the career path and promotion of managers as well as the managerial style that they develop when becoming CEOs. We identify the impact of an exogenous shock to managers' careers, in particular the business cycle at the career starting date. Economic conditions at the beginning of a manager's career have lasting effects on the career path and the ultimate outcome as a CEO. CEOs who start in recessions take less time to become CEOs, but end up as CEOs in smaller firms, receive lower compensation, and are more likely to rise through the ranks within a given firm rather than moving across firms and industries. Moreover, managers who start in recessions have more conservative management styles once they become CEOs. These managers spend less in capital expenditures and R&D, have lower leverage, are more diversified across segments, and show more concerns about cost effectiveness. While looking at the role of early job choices on CEO careers is more endogenous, the results support the idea that certain types of starting positions are feeders for successful long-run management careers: Starting in a firm that ranks within the top ten firms from which CEOs come is associated with favorable outcomes for a manager – they become CEOs in larger companies and receive higher compensation.

Antoinette Schoar
MIT Sloan School of Management
100 Main Street, E62-638
Cambridge, MA 02142
and NBER
aschoar@mit.edu

Luo Zuo
MIT Sloan School of Management
100 Main Street, E62-661
Cambridge, MA 02142
luozuo@mit.edu

I. Introduction

How do CEOs shape the strategy and performance of the companies they head? Recent papers provide evidence from large scale datasets that CEOs and other top managers have large person-specific heterogeneity in their management styles that are fixed over time, see Bertrand and Schoar (2003). These person-specific styles explain a substantial fraction of the variation in firms' capital structures, investment decisions and organizational structure. The idea that CEOs greatly affect the performance and operations of the firms they head is corroborated by a number of papers that have shown substantial changes in a firm's stock price as well as accounting performance associated with top management turnover, see for example Warner, Watts and Wruck (1989), Weisbach (1995), Perez-Gonzalez (2006), and Bennedsen et al. (2007). There is also a growing literature suggesting that specific traits of CEOs might play a role in their management approach, see for example Malmendier and Tate (2005, 2008), Graham, Harvey and Puri (2010), and Kaplan, Klebanov and Sorensen (2012). Similarly, a large literature in management science has looked at the role of CEOs, starting with Hambrick and Mason (1984) and Fligstein (1990).

However, much less is known about the factors which determine a CEO's style and evolution of the career. We examine the importance of early labor market conditions on these outcomes: How does the quality of the managerial labor market early in a CEO's career affect his or her career path and management style? Understanding the formation of managerial styles over a CEO's career is especially important if indeed CEOs have fixed management styles that they bring to their companies. In a world where management styles are person-specific, one important role of the executive labor market is to match managers with specific styles or skills to firms that are looking for those styles. However, if the formation of managerial styles is path-

dependent, past conditions of the executive labor market can affect the supply of managers and thus constrain the styles that are available in the market.

Therefore we investigate the progression of managerial careers from the beginning of the first job to the ultimate promotion to CEO. We differentiate between exogenous shocks to managers' careers such as the business cycle at the career starting date and endogenous choices of individuals such as the industry and type of a firm that someone starts in.[1] We first show that the economic conditions at the beginning of a manager's career, which are exogenous to the manager, have lasting effects on the career path and the ultimate outcome as a CEO. To avoid endogenous selection of when a manager chooses to enter the labor market we instrument labor market entry as the manager's birth year plus 24 years, since this is the average age of starting the first position over the sample.

Managers who start their careers in recessions tend to have a different career trajectory than those who start in economically prosperous periods. In the following we will call the former "recession CEOs". These recession CEOs take less time to become CEOs, are more likely to rise through the ranks within a given firm rather than move across firms and industries, ultimately end up as CEOs in smaller firms, and receive lower compensation than their boom time peers even holding constant firm size and performance. We interpret the smaller firm size and lower compensation as an indicator that the careers of recession CEOs overall are not as successful as those of boom time CEOs. The data suggests a particular channel by which recession CEOs could be hurt: If their achievements are less visible to outsiders since they do not oversee large

[1] A large literature, in particular in management science, has looked at imprinting of early career experiences on managers' long-run outcomes and strategies. However, the challenge in most of these papers is that the choices which managers make early on in their career might also be reflection of the quality and characteristics of the person. This endogeneity makes it difficult to interpret the causal direction of the effect, since long-run differences in the manager's career might not be influenced by the job the person had, but a function of the type of managers who select into this job. By looking at recessions we are able to identify an exogenous shock to managers' careers that does not suffer from this omitted variable bias.

expansion periods, they might receive fewer opportunities to switch jobs and firms (as we see in the data). This in turn might give them less bargaining power within their existing firm. The fact that recession CEOs rise faster to the top than other CEOs, seems to counter any questions about their underlying ability. The results confirm that initial conditions in the managerial labor market have persistent effects on shaping a CEO's career path, which is similar to the findings in the wider labor market, see for example Elder (1998), Oyer (2006, 2008), Cornaggia and Zou (2008), Kahn (2010), and Oreopoulos, von Wachter and Heisz (2012). However, it is even more surprising in the context of the executive labor market since one might have expected that the intense competition for talent would undo these early effects along the career path of the CEO.

Starting in a recession does not only affect the career paths of CEOs. Our second major set of findings documents that recession CEOs also have very different management styles once they are in the leadership position. CEOs who start in recessions tend to have overall more conservative management styles with respect to their corporate decisions. On the financing and investment side, recession CEOs display a tendency to invest less in capital expenditures and research and development (R&D). They also have significantly lower leverage and as a result better interest coverage. At the same time, they have lower cash holdings, which are often seen as a sign of better financial management and less slack. And, they also have lower working capital needs, which corroborate the idea that recession CEOs have tighter financial controls and are more conscientious about reducing capital needs. However, they pay higher effective tax rates possibly to avoid financial distress associated with heightened leverage or other aggressive tax planning strategies.

In addition, recession CEOs seem to manage operations more conservatively. They are more diversified across segments, show lower selling, general and administrative expenses

(SG&A) and higher profit margins. At the same time, recession CEOs also appear to engage in more earnings management possibly to meet earnings targets or to avoid debt covenant violations, and overall have less stock volatility probably as a result of the conservative management of operations. However, these CEOs also seem to invest more in long-term assets and have lower asset turnover. As a result, they have lower return on assets (ROA), but this result is only borderline significant.

This set of results implies that the pool of managerial talent in each cohort of new executives is significantly shaped by the overall economic conditions at the time of labor market entry. Recession CEOs have predictably different and more conservative management styles than boom time CEOs even several decades after starting their first job. There are two separate channels that could shape the skill or managerial style distribution: On the one hand, young managers who start in a recession might acquire a different set of skills and adopt a different mindset if they learn their trade in a time when resources are scarce rather than when they are easily available (i.e., imprinting effect). On the other hand, we could imagine that in recession times managers with more risk averse or conservative styles are more likely to be promoted (i.e., selection effect). Our data does not allow us to differentiate whether these differences are driven by an imprinting or a selection effect, since we would have to observe the entire cohort of starting managers in each year. However, the results show that executive labor markets do not appear to perfectly separate out the overall economic conditions that a manager operates in from the talent of the manager when evaluating a manager's performance. While recession CEOs rise on average faster to the top position in their firm, they end up as CEOs of smaller firms and have lower compensation than boom time CEOs even after controlling for firm size and performance. In addition, recession CEOs do not seem to have the same opportunities of moving across firms

and industries. This might be a sign that outside labor markets find it difficult to separate the true talent of a manager from the underlying conditions of the division or firm someone manages. See for example Khurana (2002) for a similar argument about CEO selection.[2]

Though clearly more endogenous, we also examine the correlation between early career choices and career progression to CEOs. We find that the particular type of position a person starts in seems to predict the long-run outcome of the manager's careers: Starting in a firm that ranks within the top ten firms from which CEOs come is associated with becoming CEO in a larger company and receiving higher compensation. These results are interesting but cannot be interpreted in a causal way since people of different qualifications and types might be choosing those different career paths early on. The position might not shape the person and their outcome, but people with particular skills might seek out these positions in order to put themselves into a position of greater skill.

Our paper is most closely related to a few recent papers which look at CEOs who lived through the Great Depression. Our contribution on the one hand is to expand the analysis to look at a broader set of cohorts, which is important since it allows us to differentiate general cohort effects from the specific experience of tight economic times. Moreover, we are able to estimate the effects of more regular business cycles on CEO outcomes compared to a once-in-a-century event. Graham and Narasimhan (2004) analyze whether CEOs who lived through the Great Depression have lower leverage levels going forward.[3] Interestingly, the authors find that leverage levels of Depression CEOs drop in the aftermath of the crisis but the use of debt increases in the 1940s at companies for which the Depression-era company president retires or

[2] Several papers look at whether exogenous shocks to firm performance affect CEO compensation or CEO turnover. For example, Jenter and Kanaan (2012) find that CEOs are significantly more likely to be fired after bad firm performance caused by factors beyond their control. Also see Bertrand and Mullainathan (2001), Garvey and Milbourn (2006), Jenter and Lewellen (2010), and Eisfeldt and Kuhnen (2011).

[3] Two closely related papers are: Graham, Hazarika and Narasimhan (2011a, 2011b).

otherwise leaves the firm. One difference to our approach is that Graham and Narasimhan (2004) look at people who already were CEOs when the Depression hit, not managers who started their careers during the Depression. So their results speak to the persistence and memory of shocks at the level of the firm while we look at how management styles are formed at an individual manager's level. Similarly, Malmendier, Tate and Yan (2011) look at how the Great Depression experience affects corporate financial policies. They measure Depression experience using birth years in the decade leading up to the Great Depression (i.e., 1920 to 1929). They find that CEOs who grew up during the Great Depression are averse to debt and lean excessively on internal finance. This is equivalent to establishing that there is a general cohort effect for the CEOs who grew up in the Depression, but it does not allow the authors to differentiate the experience of the Depression from other changes for this cohort. For example, educational inputs, managerial knowledge or even the shape of CEO careers might have changed for each cohort, which is supported by our results in this paper. In a paper that is more closely related to the methodology of this paper, Malmendier and Nagel (2011) find that past economic shocks have a long-lasting effect on individual investment choices such as reducing capital allocations to risky assets and lower stock market participation. While the authors do not look at CEOs, it is interesting that retail investors appear to display a similar reversion to more conservative investment approaches.

The rest of this paper is organized as follows. Section II provides a description of the different data sources that are used to construct the dataset and discusses potential selection issues in the sampling framework for this study. Section III analyzes the effects of early career experiences such as recessions and characteristics of the first position on the career path of the managers. Section IV quantifies the importance of starting in a recession on the managers' styles at the time that they become CEOs. And finally Section V concludes.

II. Data Description and Sample Selection

II.A. Data Construction

The data for this paper come from a number of different sources. We start with the companies and CEOs included in the Executive Compensation (Execucomp) database of Compustat between 1992 and 2010. Execucomp covers the S&P 1500 and companies that were once part of the S&P 1500. For each of these CEOs, we collect their career history from different sources that contain biographical information of the CEOs. Those data sources are the Biography in Context (formerly Biography Resource Center)[4], Bloomberg, Forbes, and the proxy filings of the company itself. This information allows us to compile data on the career profile of the CEOs and their demographic characteristics. We collect information on the different companies and non-business entities a manager worked in over his/her career, the position(s) a manager held within each of the firms and the dates at which the position was started and ended. In addition, we have information on the manager's birth year, birth place, gender, marital status, political affiliation, religion, and educational background (the school he/she graduated from as an undergraduate or with any high-level degree such as MBA, Master or PhD, as well as the year when he/she graduated). We also obtain information about whether the CEO was ever in the military, held a political office or a position in academia. This dataset is constructed at the CEO level so that we have one observation per person.

From these sources we find (some) background information for over 5,700 CEOs or about 85% of the CEOs in the Execucomp universe. In the first step, we focus on CEOs who have a relatively complete and continuous career profile to examine how economic conditions at an individual's career start affect his/her career path. Our sample includes 2,058 such CEOs.

[4] Biography in Context combines biographies from printed Gale Group publications with biographies from The Complete Marquis Who's Who. The database also includes full-text articles from hundreds of periodicals.

The descriptive statistics are tabulated in Table I. In our sample, 21% of the CEOs started their career in a recession.[5] The recession dummy is based on the business cycle dating database of the National Bureau of Economic Research (NBER). We code years that the economy is in a recession period (excluding the peak of a business cycle) as a recession year. These years receive a one while all other years are coded as a zero, since those years are moderate to medium expansion years. The descriptive statistics in Table I show that there is a large amount of mobility in the CEOs' career paths. The average CEO takes about 22 years to become a CEO, and is around 47 years old at the time of starting the first CEO position.[6] He/she has on average worked in two different industries and has been employed in three prior companies before starting the current job. The average manager held about six positions before becoming CEO, and the average tenure in each of the prior jobs is three years. Note that these averages do not fully sum up to the average time to become CEO of 22 years, since a number of CEOs have non-business appointments at some point in their career, such as political office, nonprofits, or associations. 10% of the CEOs are the founder of the firm; 15% of the CEOs have some prior experience in banking and the financial industry; 10% have some prior military experience; 8% of the CEOs started out as a consultant and 6% started out as a lawyer; 5% of the CEOs have held some political office and only 3% have spent time in academia;[7] 18% of the CEOs started out in a private firm and 9% of the CEOs started out in a firm that ranks within the top ten firms from which CEOs come.[8]

[5] As discussed in Section I and Section III.B, we use an instrumental variable approach to determine whether an individual started his/her career in a recession.

[6] 149 CEOs out of those 2,058 CEOs were CEOs in several firms. For those multiple-firm CEOs, we focus on variables related to the first CEO position. We rerun all regressions using the variables related to the last CEO position or the CEO position with the maximal firm size; our results are virtually unchanged.

[7] In computing those measures, we attempt to eliminate any positions that are not full-time appointments.

[8] Those top ten firms are: IBM, GE, P&G, Arthur Andersen, Ford, GM, ATT, McKinsey, Texas Instruments, and DuPont.

We obtain the data on the sales of the first public firm the individual worked at from Compustat (measured in the year the individual joined the firm). The average sales are $3,409 million.[9] We also obtain from Compustat the data on sales, return on assets (ROA) and Tobin's Q of the firm at which the manager became CEO, measured in the year before the CEO started the position. The average sales, ROA and Tobin's Q are $3,117 million, 15%, and 1.76, respectively. Finally, we obtain the first total compensation data for those CEOs from Execucomp. Since Execucomp started at 1992, we use the 1992 compensation data for CEOs who started the CEO position before 1992.[10] The total value of the average CEO's compensation package including option grants is $2,876,000; and the total value of the average CEO's compensation package including options exercised is $2,752,000.

We expand the sample in the second step to study how certain conditions at the beginning of the CEO's career affect the management style of the CEO when in office. In this step, we do not need detailed information on the career trajectories of those individuals and only require information on the year the individual starts his/her career, the year the individual becomes CEO, and the year the individual leaves the position of CEO. Following Bertrand and Schoar (2003), we only include CEOs who have been in their position at a firm for at least three years to ensure that they are given a chance to "imprint their mark" in a given company.[11] As is customary in the study of management style, we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. These restrictions result in a sample of 4,152 CEOs. We then form a dataset by merging those CEO characteristics and career profile with Compustat firm-level data to obtain information about the type of firm the CEO heads. This merge results in a

[9] All dollar values are converted into 1983 constant dollars. The data on sales, assets and CEO compensation are all log-transformed in the regressions.
[10] We rerun all compensation regressions excluding those CEOs who started the CEO position before 1992 and find qualitatively similar results.
[11] Our results are similar if we do not impose this condition.

panel dataset at the firm-year level during the time that the CEO was in the office, as well as at least five years before the CEO came into office and five years after the CEO left office. By construction, the dataset only contains CEOs who were at the helm of their companies in the years between 1992 and 2010. For each firm-year, we know the characteristics of the CEO who was in office at the time. Firm-level data are not matched for any employment spells of a manager prior to getting into a CEO position. Lastly, we obtain the data on mergers and acquisitions from SDC Platinum and data on stock returns from the Center for Research in Security Prices (CRSP).

II.B. Sampling Strategy

A few words of caution about the sampling strategy in this paper are in order. First, it is important to note that the sample selection is conditional upon managers who became CEOs at some point in their career and were at the helm of their company in the years between 1992 and 2010. One can argue that these CEOs are comparably successful managers in the first place. While this is a reasonable concern, there is still a substantial amount of cross-sectional variation between firms, since public firms in the United States vary largely in their size, pay level and other success metrics of the managers. Even among publicly listed US firms there are big differences between a Fortune 500 firm and a small traded firm with modest market capitalization. This heterogeneity gives us enough variation in CEO outcomes to differentiate between CEOs that had tremendous success in their careers and those CEOs that had more moderate outcomes. An alternative sampling strategy would be to look at the unconditional probabilities of selecting into the CEO position. For this purpose, one would need to get data on the entire cohort of managers that started in a given year and follow their career path over time. The advantage of this sample would be that we would be able to analyze whether there are

systematic factors that predict whether a given manager becomes a CEO or not. For example, one could answer whether managers who start in recessions are less likely to become CEOs in the first place. However, this data is prohibitively difficult to collect for two reasons. First, there is no database that identifies people who are starting as managers in a given year. More importantly, it would be very difficult to define the "population at risk" (i.e., people entering the labor market who could become CEOs in the long run). One could for example focus on the set of people who finish an MBA degree; however, we see in the data that there is a substantial fraction of CEOs who do not have an MBA degree, but rise to the top from many different positions including technical and R&D positions, or law degrees.

A second selection issue concerns the coverage of managers in sources like the Biography in Context, Bloomberg and Forbes. There might be a tendency for managers of larger and successful firms to be more likely included in the biographical sources. Moreover, those CEOs might also be more willing to share information with the public. To avoid systematic bias in the completeness of information due to selective disclosure from voluntary sources, we supplement the data collection with biographical information from proxy filings. Even after using a combination of these sources, there is indeed more systematic coverage for CEOs in larger firms, but there is no bias in the types of CEOs who are covered in later versus earlier years. It is reassuring that the composition of firms and managers who are covered over time does not seem to change much, since the tests in this paper rely on longitudinal variation across managers from different cohorts. If the type of firms that are covered was changing over time, the results could be hardwired. To alleviate concerns that differences in coverage across decades could affect the results, we include decade fixed effects in all regressions.

Finally, a different type of sampling biases could be pronounced for the cohort results, especially since the sampling strategy employed here is more likely to include CEOs in the later part of the sample if they had very rapid ascensions to the CEO position. Managers who take a longer time to become a CEO will be dropped from the sample since those individuals that take longer to get to the CEO position will not have made it to this position by the time that the data was selected. To control for this bias we rerun all regressions only for CEOs who had a "fast career" (e.g., top 50% of the sample, in the early years of the sample as well as the later years of the sample). So we are comparing managers on a fast track to the CEO position across different time periods. However, one could be concerned that those CEOs are fundamentally different from the rest of the market. For that purpose, we conduct a second robustness check that is based on following all the CEOs in one cohort. We only include CEOs that started career prior to 1980, and we repeat it for different time cutoffs. The latter approach allows us to look at all CEOs within the older cohorts. Under either approach, we find quite similar results.

III. CEO Careers and Early Recessions

III.A. Changes in Career Paths over Time

Before looking at managerial career paths as a function of specific experiences at the beginning of a manager's career, we first analyze whether there are general time trends in how the career trajectories of CEOs changed over the last few decades. A general perception from the executive labor market is that the careers of CEOs have become more active with quicker succession to the top position and more movements across firms and industries, see for example Parrino (1997), Murphy and Zabonjik (2007) or Frydman and Saks (2010).

We verify a similar trend in our data. For that purpose, we estimate a regression of career characteristics on a linear time trend (i.e., the year the individual started his career minus 1968,

the average career starting year). Table II shows a number of interesting patterns over the last few decades. We first look at the average time that managers took from the date of the first job to becoming CEOs. Rows 1 and 2 of Table II show that managers are taking a CEO job earlier in their careers and are also at a younger age when taking the job. The coefficients on the linear time trend are -0.5 and -0.2, respectively. This suggests that CEOs are on average about two years younger in each decade.

We then look at the structure of the career path of managers and their promotion to CEOs. Rows 3, 4 and 5 of Table II show that CEOs have fewer moves across industries, firms and positions in later decades of the sample; however, the coefficients are small (-0.009, -0.020, and -0.051, respectively). The coefficients on number of industries and number of positions become positive after we control for time to CEO, as shown in rows 6 and 8 (0.003 and 0.063, respectively); the coefficient on number of positions is significant at the 1% level, suggesting that holding time to CEO constant, managers on average go through one more position before becoming CEOs in each one and a half decades. And rows 9 and 10 of Table II show that managers in later periods are on a relatively fast track: They stay less time in a given job (-0.070 and -0.134, respectively). Controlling for time to CEO, in each successive decade managers on average spend one and a half years less in each position before becoming CEOs. Row 11 shows that managers in later cohorts are more likely to be the founder of the firm; the odds increase by 2% in each decade.

In addition, there is less mobility from non-business jobs into CEO positions: Managers in later cohorts are less likely to have come from the military (see row 13), law firms (see row 15), the government (see row 16), or academia (see row 17). The effect is strongest for military experience; the odds decrease by 9% in each decade. For law-firm, government and academia

experience, the odds all decrease by 1% in each decade. It might not be surprising that military and government as a starting point for CEOs has dropped, since the role of these institutions in the business has shrunk over the same time period. Row 19 shows that managers in later cohorts are more likely to have come from a firm that ranks within the top ten firms from which CEOs come, and the odds increase by 1% in each decade; this result suggests that the top ten firms have strengthened their ability to "produce" CEOs over time. We do not find discernable time trends for banking or consulting experience (see rows 12 and 14), private vs. public starting firm (see row 18), or the size of the first firm (see row 20).

III.B. Recession Effects on Managerial Career Paths

In a first step we want to understand how the economic conditions at the time that a manager enters the labor market affect the type of career the person will have. The motivation behind this analysis is that early career experiences might have a long lasting imprint on the manager's career outcomes and the ultimate success in business. In a second step we will then analyze if these early career experiences also affect the management style of the CEOs. As discussed above, we need to keep in mind that the sample is constructed in such a way as to compare future CEOs who enter either in good or bad economic times. We will not be able to look at the likelihood that someone becomes a CEO in the first place since all individuals in our sample will be CEOs at some point in their career.

There is a widespread perception that early career experiences can shape a manager and might have lasting effects on his/her career. The challenge in testing the validity of these arguments is that career choices early in the life of a manager are not exogenous, but depend on the person's skill, preferences and other unobservable characteristics. For example, Bloomberg Businessweek and other publications have annual rankings of the top 100 companies to start

one's career in and argue that starting at a consulting firm or an investment bank affects the career trajectory. However, this interpretation is misleading since obviously better employers are able to attract the best candidates from the start.

However, one factor that is exogenous to the career choice of managers is the economic condition at the time that managers enter the labor market, since a person's birth date is largely exogenous to their own life. One concern, however, is that smart individuals know that it could be more difficult to succeed when starting one's career in a downturn and thus might try to postpone entering the labor market when the economy is down. In that case, the most well-informed and potentially smartest people would delay entering the market while the average employee still enters, which then would lead to selection effects. To avoid this type of adverse selection into the market, we instrument a manager's career starting date with the person's birth year plus 24 years. This specification is based on the observation that the average person's starting date at his/her first job is at the age of 24 in our sample. This strategy allows us to focus only on the exogenous part of a manager's starting conditions and not the endogenous choices he/she might have made in the timing of the career start. Our main variable of interest, "Recession", is a dummy variable that equals one if there was a recession at the time of the manager's job market entry, and zero otherwise. We call these managers who start their careers in recessions "recession CEOs".[12]

In Table III we analyze a manager's career path as a function of the economic conditions at the time of labor market entry. For that purpose, we regress different measures of the shape of the career path on a dummy for whether there was a recession at the time of the manager's job

[12] In untabulated results, we see in the data that recession CEOs tend to have a longer time lag between the year they finish their undergraduate degree and the year they start their first job than non-recession CEOs; recession CEOs also tend to have more post-graduate degrees and are older when entering the labor force. These results suggest that some smart individuals do delay their job market entry when in a recession.

market entry. As discussed above, we instrument labor market entry with the average age at which managers enter the labor force (i.e., year of birth plus 24 years). The specification controls for decade fixed effects (of the decade in which a manager was born) to account for any long-run trends in the economic environment and the way CEO careers have evolved in the United States. Therefore, the variation in these regressions comes from comparing CEOs within a decade who started in a recession year versus a regular expansion year. We also control for the industry in which a CEO started the career, where industry effects are measured at the one-digit SIC level.[13] The rationale for including an industry control is that different industries might vary in their propensity and speed of promoting people. It would be especially interesting if there were large differences in the types of industries that CEOs start in when there is a recession year. However, our results show that the coefficient of interest on the recession dummy is almost unchanged when we do not include the industry fixed effect. These results suggest that the selection into industries based on the economic conditions at the beginning of the career does not have a measurable effect on the career path.

Panel A of Table III shows that managers who start in recession years take less time to become CEOs than non-recession CEOs (see column 1), and they are also younger when becoming CEOs (see column 2). On average recession CEOs take about 1.5 years less time and are about one year younger when they are promoted into the top job. We then look at the number of industries and firms a manager was employed in over the career path before becoming CEO. Columns 3 and 4 show that recession CEOs have less mobility across both industries and firms; the effects are not so large, with coefficients equal to -0.128 and -0.137, respectively. In column 5, we look at the number of business positions a person held before becoming CEO for the first time. CEOs who start in recession periods tend to go through fewer positions before becoming

[13] We code consulting and law firms as separate industries.

CEOs than those individuals that start in a regular year. The coefficient is -0.421, which translates into about one year less time to reach the CEO position for an average manager (-0.421 times 2, the median of average tenure as shown in Table I). In column 6 we show that the average tenure within each position is longer for those people who start in recession years. The dependent variable "Av Tenure" is calculated as the number of years a manager stayed in a given position, averaged over all business positions in his/her career prior to becoming CEO. The coefficient of 0.367 translates into about two years more time to become CEOs for an average manager (0.367 times 5, the median of number of positions as shown in Table I). Finally, we do not find statistically significant evidence regarding how economic conditions at one's career start affects the probability to be the founder of the firm (see column 7).

Overall, these results suggest that managers who start in recession times tend to rise within their organization and seem to have internal career tracks rather than moving across firms. One interpretation of this result could be that it is difficult for outsiders to separate the quality of a manager from the overall market conditions. Thus, people who start in worse economic times might find it more difficult to communicate their quality to the outside market since the firm is not growing. However, managers who start in boom times will have positive results even if they did not personally contribute a lot to the success of the firm. These managers might get more outside employment opportunities and therefore are able to move across firms.[14]

In Panel B of Table III, we look at whether managers who start their career in recessions also have different early career experiences. The results show that recession CEOs are less likely to start out as a consultant (see column 3), more likely to work in a private firm when entering the labor force (see column 5), and less likely to get their first job in a top ten firm that is famous

[14] In our sample, there are 320 individuals who have their whole careers in one firm (i.e., starting in an S&P 1500 firm and end up as the CEO of that firm). We find that recession CEOs are more likely to be those one-firm individuals. Our results still hold after we drop those one-firm individuals.

for "producing" CEOs (see column 6). Specifically, the change in odds associated with recession CEOs are -2.5% (for consulting experience), 4.3% (for starting in a private firm), and -3.1% (for starting in a top ten firm), respectively. In addition, when we look at the sales of the first public firm that those individuals worked at, recession CEOs tend to work in a smaller firm than non-recession CEOs (see column 7).[15] The coefficient of -0.29 suggests that, on average, the sales of the first public firm are 25% lower for recession CEOs than for non-recession CEOs.[16] However, we do not find evidence that starting one's career in a recession affects his/her chances of getting into a bank (see column 1), military (see column 2) or government (see column 4). If starting one's career in a consulting firm, top ten firm, or big public firm is viewed as desirable, the results suggest that recession CEOs tend to have a less favorable early career experience.

We now want to understand whether the conditions during the CEO's first position affect not only the shape of the manager's career, but also the ultimate outcome. For that purpose, in Table IV we focus on two measures that can proxy for the success of the manager's career: the size of the firm in which he/she becomes a CEO, and the CEO's first total compensation. We measure firm size as the natural logarithm of sales in the year before the CEO starts the position in order to abstract from any decisions about firm size that are a function of the CEOs' choices within the firm. We will interpret the size of the firm that someone runs as an indicator of the overall success of the manager's career. We also look at ROA and Tobin's Q of the firm in which he/she becomes a CEO.

Column 1 of Table IV suggests that recession CEOs on average end up in smaller firms than managers who start in boom times; the coefficient of -0.234 suggests that on average firm size for recession CEOs is 20% smaller than that for non-recession CEOs (that is, $e^{-0.234} - 1$).

[15] We also find that in the subsample of individuals who start their career in a public firm (749 observations with sales data), recession CEOs tend to work in a smaller firm than non-recession CEOs.
[16] We compute the percentage effect of recession on the size of the first public firm as follows: $e^{-0.29} - 1 = -0.25$.

However, we find no discernable differences in terms of profitability (see column 2) or valuation (see column 3), suggesting that these firms are not necessarily of a worse type. We then look at two proxies for the first total compensation of CEOs: the first total compensation including option grants[17] and the first total compensation including options exercised[18]. The results in columns 4 and 5 suggest that on average recession CEOs receive lower total compensation when becoming CEOs, at least once we take into account options exercised. The coefficient in column 6 (-0.185) suggests that on average recession CEOs receive 17% lower compensation than non-recession CEOs (that is, $e^{-0.185} - 1$). In addition, this lower pay is not just a function of running a smaller firm, since it persists even after we control for the size and profitability of the firm (see columns 6 and 7). The economic magnitude remains similar; the coefficient in column 7 (-0.117) suggests that on average the negative effect of recession on pay is -11% (that is, $e^{-0.117} - 1$), holding firm size and profitability constant.[19]

Overall, these results suggest that managers who start in recession years tend to have careers that progress within a given firm, are less likely to be promoted through moves across firms, and thus take less time to reach a CEO position. Moreover, these early career effects have lasting impacts on the ultimate outcome of a manager's career, since we see that these managers end up at smaller firms and receive lower total compensation when becoming CEOs.[20]

We also analyze whether the type of firm or position that a manager starts in has long-run implications for the manager's career. In Table V we therefore investigate whether managers'

[17] It is the Execucomp variable "tdc1", comprised of the following: salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), long-term incentive payouts, and all other total.

[18] It is the Execucomp variable "tdc2", comprised of the following: salary, bonus, other annual, total value of restricted stock granted, net value of stock options exercised, long-term incentive payouts, and all other total.

[19] When we supplement the data with the first available data from Compustat (to achieve the full sample of 2,058 observations) and rerun all the regressions in Table IV, we obtain quite similar results.

[20] We also find that recession CEOs are not more likely to get a second CEO job. This result allows us to rule out the possibility that these recession CEOs in their second job go on to run a larger firm and have a higher paying job after starting in the smaller firm that we document.

career paths and the type of the firm at which they become CEOs vary with the characteristics of the initial position. We focus on a few starting jobs that are usually considered high impacts such as starting in a firm that ranks within the top ten firms from which CEOs come. However, it is important to note that this set of regressions is not as well identified as the recession effects since managers can endogenously select to certain starting positions depending on some unobserved differences which might in turn also affect the CEO's long-run career outcomes. Therefore it is not possible to infer any direction of causality from these regressions, but it is still interesting to understand whether there are systematic differences in the career paths depending on the starting position that a manager had.

Results in Panel A of Table V suggest that managers who start his/her career in a top ten firm have a career path that is opposite to what we observe for recession CEOs. On average those managers take three more years to become CEOs (see column 1). They also exhibit more mobility across industries (see column 3), firms (see column 4) and jobs (see column 5); the coefficients are all near one (0.681, 0.831, and 1.098 respectively). And, they stay less time in a given job (see column 6), with coefficient equal to -0.631. Finally, the last column shows that they are also less likely to be the founder of the firm, with -7.4% change in odds; this result suggests that they are more likely to be hired CEOs.

In Panel B of Table V, we look at the type of the firm at which those managers become CEOs. The results suggest that starting in a top ten firm is indeed associated with more favorite career outcomes: Those managers become CEOs of larger firms (see column 1) and receive higher compensation (see columns 4 and 6). The effects are also economically large; on average firm size is 40% larger for managers starting their job in a top ten firm than other managers (that is, $e^{0.345} - 1$); they also receive about 20% higher compensation (that is, $e^{0.197} - 1$ or $e^{0.155} - 1$).

III.C. Robustness Checks

As discussed before, one concern with regard to the cohort results reported above is that some of the effects could be driven by the sample selection. This is particularly important for the results that managers who start in recessions have different career paths and take less time to become CEOs. We could imagine that there are two secular trends coinciding at the same time, since there were more recessions early in the century and our descriptive statistics show that over the last few decades the nature of CEO careers and promotions has changed as well. We tried to control for this problem by including decade fixed effects. Thus, even if there is a time trend in how careers are changing, we are only using the variation between recession and non-recession years within a decade.

However, since these results are at the core of our analysis we also try a battery of other robustness checks to verify that our findings are not driven by spurious correlations or sample selection problems. The most important sample selection issue in this context is that managers who might take longer to become CEOs will not have had enough time to be a CEO if we focus on the later years of our data. Therefore, we use different sample cutoffs to alleviate the sample selection bias. The first approach is to include only CEOs who started their career prior to 1980 or 1985 (i.e., the start of the first position in business was prior to 1980 or 1985). The issue that managers have different speed of becoming CEOs is much less prominent here. The downside of this approach is that we are losing some observations. The second approach is to include only CEOs who made it to a CEO before the age of 45 or 50 in each cohort. Under this model we can compare managers with similar trajectories across time. While this approach allows us to get rid of the selection bias discussed above, it forces us to focus on a particular subset of managers

(i.e., those managers that are fast rising stars). No matter which of the two approaches we adopt, we still find qualitatively very similar results.

IV. Managerial Styles and Early Recessions

IV.A. Recession Effects on Managerial Styles

The second major question the paper focuses on is the impact that early career experiences can have on the management style that a manager adopts even decades later when he/she becomes a CEO. We ask whether early career experiences have a lasting imprint decades later when the person becomes a CEO. On average this would be 20 years after the CEO starts the first job. For example, we can test whether managers who have their early career experiences during recessions have more conservative management styles than those who start in boom times. The idea is that these early experiences have such a lasting effect that they translate into differences in firm level decisions even 20 years later when the average CEO starts his/her first job as a CEO. This test is similar to the approach used by Bertrand and Schoar (2003) in using changes in observable outcomes at the firm as an indicator of the impact that the CEO has on the firm. However, we do not have to rely only on firm switchers (i.e., CEOs observed in multiple firms) in this regression since we can compare changes in the firm behavior when a manager with a recession background becomes CEO to managers that did not start in a recession.

To test this hypothesis we start with Compustat data for the years that a given CEO was at the helm of the firm. We then match the CEO's career history to the annual firm data for the time that a CEO is in that company. The firm level variables of interest are corporate outcomes related to investment, financial and tax policies, as well as organizational strategy, financial reporting, firm risk and operating performance. We regress firm outcomes on the CEO's career profile to test whether decisions vary systematically based on the CEO's profile. To account for

fixed differences in outcomes at the firm level, in all regressions we control for firm fixed effects.[21] Thus, the "Recession" coefficient is identified from firms switching from a recession CEO to a non-recession CEO, or vice versa.[22] As before, we also include decade fixed effects to control for any long-run trends in management styles and economic conditions. The variation in these regressions comes from the differences in firm outcomes between CEOs who started in a boom versus a recession time within a given decade.

The results from these tests are presented in Table VI.[23] In columns 1 to 3 of Panel A, we report the results for investment policy. The first variable in the table is capital expenditures. The specification includes controls for firm fixed effects, decade fixed effects, cash flows, and lagged Tobin's Q. Managers who start in recessions tend to have lower levels of capital expenditures than managers who started in other times; and the effect is -0.7% of lagged total assets. The next variable in Panel A is R&D expenditures.[24] The result shows that recession CEOs also spend less on R&D, and the effect is -0.2% of lagged total assets. Column 3 shows that recession CEOs do not differ in the propensity to do M&As, as measured by the total number of acquisitions over the fiscal year.[25] The first three columns suggest that recession CEOs have more conservative investment policies and avoid excessive capital expenditures and R&D expenses.

Columns 4 to 8 focus on financial policy. Column 4 shows that leverage levels are significantly lower for firms whose managers started in a recession compared to those managers

[21] In this way, we avoid confounding effects of firm characteristics due to the possible endogenous matching of CEOs to firms, see Graham, Harvey and Puri (2010).

[22] In untabulated results, we find that the switches between a recession CEO and a non-recession CEO (or vice versa) in a given firm are random, suggesting that firms are not proactively selecting for a certain type of CEOs.

[23] We include basic control variables in these regressions, mainly following Bertrand and Schoar (2003). The coefficients on all control variables have predicted signs.

[24] As in other studies (e.g., Coles, Daniel and Naveen 2006), we set R&D equal to zero when it is missing from Compustat.

[25] Results are similar if we use the total dollar value of acquisitions over the fiscal year. However, we should interpret the M&A results with caution since we only have M&A data (obtained from SDC) for around one-third of the total firm-year observations in our sample. In untabulated results, we also find that recession CEOs tend to engage in more cash deals than non-recession CEOs, consistent with their conservative investment style.

that started in a boom period. Recession CEOs lower the leverage ratio by 1% relative to other CEOs. In column 4 we use interest coverage as the measure of leverage and find similar results; recession CEOs increase interest coverage[26] by 8% relative to non-recession CEOs (that is, $e^{0.077} - 1$). Column 5 shows that recession CEOs have lower cash holdings (-1.1% of lagged total assets), which is often seen as a sign of better financial management and less wasteful slack in the use of capital. The fact that recession CEOs also have less working capital need (see column 7, with coefficient equal to -2.7%) suggests that they are able to run a tight ship and/or get financing from their customers rather than having to finance them. Column 8 shows that "Recession" does not have a significant impact on a firm's dividend policy.

In column 9 of Panel A we look at the tax policy. Dyreng, Hanlon and Maydew (2010) document that individual executives play a significant role in determining the level of tax avoidance that firms undertake (as proxied by effective tax rates). We find that firms led by recession CEOs have higher effective tax rates as measured by the ratio of cash taxes paid to pretax income (with coefficient equal to 4.2%).[27] This result is consistent with the finding that recession CEOs have lower leverage levels than non-recession CEOs, probably because they are more concerned with the costs of financial distress with heightened leverage or other aggressive tax planning strategies than the associated tax benefits.

Columns 1 to 3 in Panel B report our results for the organizational policy variables. Recession CEOs seem to manage operations more conservatively as well. Column 1 shows that they are more diversified across business segments (with coefficient equal to 0.437), possibly to

[26] We use the natural logarithm of the interest coverage ratio in the regression because the raw ratio is highly skewed due to large outliers (firms with very low interest expenses).

[27] Following Dyreng, Hanlon and Maydew (2010), pretax income is measured as income before discontinued operations and extraordinary items and excludes special items. Effective tax rates with negative pretax income are set to missing. The remaining non-missing effective tax rates are winsorized (reset) so that the largest observation is 1 and the smallest is 0. Basic control variables in the regression include firm size and a dummy for whether the firm has a positive value of tax loss carry-forward (TLCF).

hedge against the risk of a specific industry. Recession CEOs also show more concerns about cost effectiveness since they have lower selling, general and administrative expenses (see column 2, with coefficient equal to -2%) and a higher profit margin (see column 3, with coefficient equal to 1%).

Columns 4 and 5 focus on firms' financial reporting outcomes. We use the modified Dechow and Dichev (2002) accruals quality measure as a proxy for earnings management. In the model, accruals quality is measured by the extent to which working capital accruals map into operating cash flow realizations. The unexplained portion of the variation in working capital accruals is a measure of earnings management (a greater unexplained portion implies more earnings management).[28] We measure earnings persistence as the slope coefficient from a regression of current earnings on lagged earnings over a rolling ten-year window (Francis, LaFond, Olsson and Schipper 2004). Extant accounting literature suggests that a CEO can affect corporate financial reporting by setting the "tone at the top" (Hunton, Hoitash and Thibodeau 2011). We find that firms led by recession CEOs engage in more earnings management (with coefficient equal to 0.134), and have less persistent earnings possibly due to accrual reversals caused by earnings management (with coefficient equal to -0.062).[29] These results suggest that a recession CEO's conservative "tone at the top" may put more pressure on mid-level financial reporting managers to manage earnings to meet or beat earnings targets, or to avoid debt covenant violations. In column 6 we look at the overall riskiness of firms as proxied by the stock

[28] We follow the procedure developed in Armstrong, Core, Taylor and Verrecchia (2011). In particular, we estimate accruals quality as the standard deviation of the firm-level residuals from the modified Dechow and Dichev (2002) model over the previous five years, scaled by the average of the absolute value of working capital accruals over that period. The model is a regression of working capital accruals on past, current and future operating cash flows plus the change in revenue and PP&E. All variables are scaled by average total assets. The model is estimated cross-sectionally for each industry with at least 20 observations in a given year based on the Fama and French (1997) 48-industry classification.

[29] We lose many observations in these two regressions due to data requirement: The Dechow and Dichev model requires seven consecutive years of data, and the persistence measure requires ten consecutive years of data.

return volatility (Coles, Daniel and Naveen 2006). The result suggests that because of the conservative management styles, recession CEOs lower stock return volatility by 3.2%.

Finally, we look at the effect of "Recession" on firms' operating performance. Column 7 and 8 show that recession CEOs invest more in long-term assets (with coefficient equal to 1.4%) and have lower asset turnover (with coefficient equal to -8.4%) probably due to asset diversification concerns. As a result, a recession CEO has a lower rate of return on assets in his/her firm than a comparable firm with a CEO who did not start in a recession (see column 9).[30] It is not a very strong effect on ROA, but it is borderline significant (with coefficient equal to -0.9%). In column 10, we use an alternative accounting measure of performance that is less subject to accounting manipulations, operating cash flow (as a ratio of lagged total assets), and find a quite similar result (with coefficient equal to -0.7%).[31]

Taken together, the results seem to suggest that recession CEOs indeed manage their firms more conservatively. In a further analysis, we ask whether recession CEOs manage firms differently in recession or boom times. It is possible that recession CEOs manage firms more efficiently in recession times and perform better in such difficult periods, while non-recession CEOs are better at managing firms in boom times. However, our results indicate that recession CEOs do not perform differently in recessions or booms.[32] This result supports the notion that managerial styles, once formed, are relatively fixed over time.

[30] Recall that: Return on Assets (ROA) = Profit Margin × Asset Turnover.

[31] It is important to note that the operating performance results are not driven by the possibility that recession CEOs are in different industries since we are controlling for firm fixed effects.

[32] Specifically, we create a dummy for whether the firm-year is a recession year, and we interact it with the "Recession" CEO dummy we originally have. We rerun all regressions in Table VI with the recession year dummy, the "Recession" CEO dummy, and the interaction term of these two. The coefficients on the "Recession" CEO dummy remain similar to what we report in Table VI, but we do not find any significant coefficient for the interaction term.

IV.B. Discussion of Results

It is important to point out that the results from this exercise can be interpreted in two ways. Managers who start their careers during recessions could either be actively shaped by the recession experiences and therefore their style is changed. The idea is that managers form their set of skills and tools in the early career years. In the case of a recession it could mean that managers observe how to manage cost cutting, deal with financial constraints and other methods that are valuable in downturns. An alternative interpretation is that people with different skills (or styles) come into the labor market at a fixed rate but only those individuals who fit the management needs of the period are promoted. So, for example, in economically difficult times firms and markets might be selecting managers who are conservative and know how to preserve the firm during a downturn. In other words, the results could be an outcome of either changes in the selection criteria during recessions or changes in the learning that managers are exposed to. In more grandiose words, one could liken this to a question of nature versus nurture: Are managerial types fixed from the start or form in response to the environmental condition? While the actual channel by which styles emerge is not crucial for the interpretation of our results in the current paper, it would be very interesting to understand this channel more deeply in future research.

However, we have some suggestive evidence that the channel by which styles emerge, at least in part, is through an active imprinting of managers. If we believe that selection plays a role in sorting out managers during a recession who do not fit the needs of the time, then we would expect the results to hold irrespective of whether the recession occurs at the beginning or the middle of their career. However, if these differences in managers' behaviors are actively shaped by their early career experiences, then the recession should have a stronger effect if it occurs at

the beginning of a person's career rather than in the middle. In fact, most of the managers in our sample are hit by a recession in the middle of their career. The dynamic effects of recessions that we observe seem to support the latter interpretation that managers are actively shaped or imprinted by their early experiences which in turn seems to have long-run effects on their management styles.[33]

V. Conclusions

The results of this paper suggest that the heterogeneity in management styles seems to be affected by the environment at the start of a CEO's career. In particular, we observe that starting in recession times results in CEOs with more conservative styles. Early career conditions also affect the career path of the manager on the way to CEO. We also show that the number and speed of outside offers and industry switches across the career increase when the manager starts his/her career in better economic conditions. The effects on the career path are quite persistent since they affect the managers' career choices even 20 years after starting their first job. The long-run nature of the impact might suggest that markets are not fully separating the individual achievements of managers versus the importance of the overall economic performance. We also find that the type of the firm that a CEO starts in has implications for later career progression, but causation here is less obvious since people with certain skills might select into jobs early on. For example, managers who start in a top ten firm tend to become CEOs in a larger firm and receive higher compensation, but it is possible that these types of firms attract the brightest students in the first place and therefore it is not clear how much added value companies have to pay for.

[33] We also look at whether the economic conditions at the beginning of a manager's career affect the "timing" when he/she becomes a CEO. We do not find evidence that firms are more likely to select recession CEOs when hiring during recession times.

These findings can have broad implications for the managerial labor market. If the formation of CEOs and their management styles follows a time-to-build model, then the persistence of formative experiences affects the composition of available management styles at a given point in time. For instance, after extended times of high growth there are many managers who learned how to manage growing companies, but at the same time there could be a shortage of managers who know how to run firms in distress or turn-around situations. This could lead to potential mismatches if the economic conditions or the industry base change radically. If the majority of existing managers are brought up in a boom time there might be a net shortage of managers who know how to manage in a recession once the economic outlook changes. These results suggest that the supply of talent into the CEO labor market could sometimes have severe constraints which in turn affect how firms are run if boards are constrained in their choice of CEOs by the available talent in the market. Therefore, it can be very important to understand how executive labor markets function and how they interact with the boards' task of selecting the best manager for a given vacancy.

References

Armstrong, Christopher S., John E. Core, Daniel J. Taylor and Robert E. Verrecchia, "When Does Information Asymmetry Affect the Cost of Capital?," *Journal of Accounting Research*, 49 (2011), 1-40.

Bennedsen, Morten, Kasper Meisner Nielsen, Francisco Perez-Gonzalez and Daniel Wolfenzon, "Inside the Family Firm: The Role of Families in Succession Decisions and Performance," *Quarterly Journal of Economics*, 122 (2007), 647-691.

Bertrand, Marianne and Sendhil Mullainathan, "Are CEOs Rewarded for Luck? The Ones without Principals Are," *Quarterly Journal of Economics*, 116 (2001), 901-932.

Bertrand, Marianne and Antoinette Schoar, "Managing with Style: The Effect of Managers on Firm Policies," *Quarterly Journal of Economics*, 118 (2003), 1169-1208.

Coles, Jeffrey L., Naveen D. Daniel and Lalitha Naveen, "Managerial Incentives and Risk-Taking," *Journal of Financial Economics*, 79 (2006), 431-468.

Cornaggia, Jess and Lin Zou, "Does Initial Placement Matter for Equity Analysts' Forecast Accuracy?," Working Paper (2008).

Dechow, Patricia M. and Ilia D. Dichev, "The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors," *The Accounting Review*, 77 (2002), 35-59.

Dyreng, Scott D., Michelle Hanlon and Edward L. Maydew, "The Effects of Executives on Corporate Tax Avoidance," *The Accounting Review*, 85 (2010), 1163-1189.

Eisfeldt, Andrea L. and Camelia M. Kuhnen, "CEO Turnover in a Competitive Assignment Framework," Working Paper (2011).

Elder, Glen H., *Children of the Great Depression*, 25th Anniversary Edition, (Boulder, CO: Westview Press, 1998).

Fama, Eugene F. and Kenneth R. French, "Industry Costs of Equity," *Journal of Financial Economics*, 43 (1997), 153-193.

Francis, Jennifer, Ryan LaFond, Per M. Olsson and Katherine Schipper, "Costs of Equity and Earnings Attributes," *The Accounting Review*, 79 (2004), 967-1010.

Fligstein, Neil, *The Transformation of Corporate Control*, (Cambridge, MA: Harvard University Press, 1990).

Frydman, Carola and Raven Saks, "Executive Compensation: A New View from a Long-Term Perspective, 1936–2005," *Review of Financial Studies*, 23 (2010), 2099-2138.

Garvey, Gerald T. and Todd T. Milbourn, "Asymmetric Benchmarking in Compensation: Executives Are Rewarded for Good Luck but Not Penalized for Bad," *Journal of Financial Economics*, 82 (2006), 197-225.

Graham, John R., Campbell R. Harvey and Manju Puri, "Managerial Attitudes and Corporate Actions," Working Paper (2010).

Graham, John R., Sonali Hazarika and Krishnamoorthy Narasimhan, "Financial Distress in the Great Depression," *Financial Management*, 40 (2011a), 821-844.

Graham, John R., Sonali Hazarika and Krishnamoorthy Narasimhan, "Corporate Governance, Debt, and Investment Policy during the Great Depression," *Management Science*, 57 (2011b), 2083–2100.

Graham, John R. and Krishna Narasimhan, "Corporate Survival and Managerial Experiences during the Great Depression," Working Paper (2004).

Hambrick, Donald C. and Phyllis A. Mason, "Upper Echelons: The Organization as a Reflection of its Top Managers," *Academy of Management Review*, 9 (1984), 193-206.

Hunton, James E., Rani Hoitash and Jay C. Thibodeau, "The Relationship between Perceived Tone at the Top and Earnings Quality," *Contemporary Accounting Research*, 28 (2011), 1190-1224.

Jenter, Dirk and Fadi Kanaan, "CEO Turnover and Relative Performance Evaluation," *Journal of Finance*, Forthcoming (2012).

Jenter, Dirk and Katharina Lewellen, "Performance-Induced CEO Turnover," Working Paper (2010).

Kahn, Lisa B., "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy," *Labour Economics*, 17 (2010), 303-316.

Kaplan, Steven N., Mark M. Klebanov and Morten Sorensen, "Which CEO Characteristics and Abilities Matter?," *Journal of Finance*, Forthcoming (2012).

Khurana, Rakesh, *Searching for a Corporate Savior: The Irrational Quest for Charismatic CEOs*, (Princeton, NJ: Princeton University Press, 2002)

Malmendier, Ulrike and Stefan Nagel, "Depression Babies: Do Macroeconomic Experiences Affect Risk-Taking?," *Quarterly Journal of Economics*, 126 (2011), 373-416.

Malmendier, Ulrike and Geoffrey Tate, "CEO Overconfidence and Corporate Investment," *Journal of Finance*, 60 (2005), 2660-2700.

Malmendier, Ulrike and Geoffrey Tate, "Who Makes Acquisitions? CEO Overconfidence and the Market's Reaction," *Journal of Financial Economics*, 89 (2008), 20-43.

Malmendier, Ulrike, Geoffrey Tate and Jonathan Yan, "Overconfidence and Early-Life Experiences: The Effect of Managerial Traits on Corporate Financial Policies," *Journal of Finance*, 66 (2011), 1687-1733.

Murphy, Kevin J. and Jan Zabojnik, "Managerial Capital and the Market for CEOs," Working Paper (2007).

Oreopoulos, Philip, Till von Wachter and Andrew Heisz, "The Short- and Long-Term Career Effects of Graduating in a Recession," *American Economic Journal: Applied Economics*, 4 (2012), 1–29.

Oyer, Paul, "Initial Labor Market Conditions and Long-Term Outcomes for Economists," *Journal of Economic Perspectives*, 20 (2006), 143-160.

Oyer, Paul, "The Making of an Investment Banker: Stock Market Shocks, Career Choice, and Lifetime Income," *Journal of Finance*, 63 (2008), 2601–2628.

Parrino, Robert, "CEO Turnover and Outside Succession: A Cross-Sectional Analysis," *Journal of Financial Economics*, 46 (1997), 165-197.

Perez-Gonzalez, Francisco, "Inherited Control and Firm Performance," *American Economic Review*, 96 (2006), 1559-1588.

Warner, Jerold B., Ross L. Watts and Karen Wruck, "Stock Prices and Top Management Changes," *Journal of Financial Economics*, 20 (1989), 461-492.

Weisbach, Michael S., "CEO Turnover and the Firm's Investment Decisions," *Journal of Financial Economics*, 37 (1995), 159-188.

Table I: Descriptive Statistics

	Obs.	Mean	Median	SD
Recession	2,058	0.21	0.00	0.41
Time to CEO	2,058	22.0	23.0	9.94
Age to CEO	2,058	47.3	48.0	8.48
Num Industries	2,058	1.91	2.00	0.95
Num Firms	2,058	2.57	2.00	1.55
Num Positions	2,058	5.78	5.00	3.86
Av Tenure	2,058	3.15	2.00	3.28
Founder	2,058	0.10	0.00	0.30
Banking	2,058	0.15	0.00	0.36
Military	2,058	0.10	0.00	0.30
Consulting	2,058	0.08	0.00	0.26
Law	2,058	0.06	0.00	0.23
Politics	2,058	0.05	0.00	0.22
University	2,058	0.03	0.00	0.17
First Private	2,058	0.18	0.00	0.38
Top Ten	2,058	0.09	0.00	0.29
First Sales ($m)	2,058	3,409	714	7,754
Sales of Firm at Which CEO ($m)	1,566	3,117	936	7,224
ROA of Firm at Which CEO	1,511	0.15	0.14	0.13
Tobin's Q of Firm at Which CEO	1,536	1.76	1.28	2.95
CEO First Comp. incl. Option Grants ($000)	1,715	2,876	1,412	5,046
CEO First Comp. incl. Options Exercised ($000)	1,764	2,752	1,063	6,014

Notes: The dataset is based on a cross-section of individuals that held a CEO position at some point between 1992 and 2010 in an "Execucomp" firm. We collect information on CEOs' background and career path from the Biography in Context (formerly Biography Resource Center), Bloomberg, Forbes, and the proxy filings of the company itself. We find (some) background information for about 85% of these "Execucomp" CEOs. In the reported tests on CEO careers, we only include 2,058 CEOs who have a relatively complete and continuous career profile. Data on sales, ROA and Tobin's Q are obtained from Compustat; compensation data are obtained from Execucomp. All dollar values are converted into 1983 constant dollars. The values of sales and assets are in millions; and CEO compensation data are in thousands. Details on the definition and construction of the variables reported in the table are available in Appendix A.

Table II: Changes in Career Paths over Time

		Time Trend	Time to CEO	Constant	Obs.	Adj. R^2
(1)	Time to CEO	-0.532***		22.013***	2,058	0.322
		(0.018)		(0.181)		
(2)	Age to CEO	-0.216***		47.327***	2,058	0.073
		(0.019)		(0.180)		
(3)	Num Industries	-0.009***		1.914***	2,058	0.009
		(0.002)		(0.021)		
(4)	Num Firms	-0.020***		2.568***	2,058	0.018
		(0.003)		(0.034)		
(5)	Num Positions	-0.051***		5.776***	2,058	0.019
		(0.008)		(0.084)		
(6)	Num Industries	0.003	0.022***	1.419***	2,058	0.046
		(0.002)	(0.002)	(0.048)		
(7)	Num Firms	-0.002	0.033***	1.851***	2,058	0.019
		(0.004)	(0.004)	(0.080)		
(8)	Num Positions	0.063***	0.214***	1.061***	2,058	0.225
		(0.007)	(0.008)	(0.156)		
(9)	Av Tenure	-0.070***		3.147***	2,058	0.051
		(0.008)		(0.070)		
(10)	Av Tenure	-0.134***	-0.120***	5.792***	2,058	0.141
		(0.009)	(0.012)	(0.279)		
(11)	Founding CEO	0.002***		0.102***	2,058	0.006
		(0.001)		(0.007)		
(12)	Banking	-0.000		0.153***	2,058	-0.000
		(0.001)		(0.008)		
(13)	Military	-0.009***		0.100***	2,058	0.104
		(0.001)		(0.006)		
(14)	Consulting	-0.000		0.076***	2,058	-0.000
		(0.000)		(0.006)		
(15)	Law	-0.001*		0.056***	2,058	0.001
		(0.000)		(0.005)		
(16)	Politics	-0.001***		0.049***	2,058	0.004
		(0.000)		(0.005)		
(17)	University	-0.001***		0.032***	2,058	0.006
		(0.000)		(0.004)		
(18)	First Private	-0.000		0.180***	2,058	-0.000
		(0.001)		(0.008)		
(19)	Top Ten	0.001**		0.095***	2,058	0.002
		(0.001)		(0.006)		
(20)	First Sales	-0.005		6.333***	2,058	0.000
		(0.005)		(0.049)		

Notes: The sample is the CEO-level dataset as described in subsection II.A and Table I. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales is log transformed. The first entry in each row is the estimated coefficient from a regression of the dependent variable (described on the left of the table) on a linear time trend (i.e., the year the individual started his career minus 1968). Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table III: Recession and CEO Careers

Panel A: Career Path

	(1) Time to CEO	(2) Age to CEO	(3) Num Industries	(4) Num Firms	(5) Num Positions	(6) Av Tenure	(7) Founder
Recession	-1.549***	-0.907**	-0.128**	-0.137*	-0.421**	0.367*	0.003
	(0.550)	(0.449)	(0.052)	(0.082)	(0.214)	(0.193)	(0.017)
Constant	34.679***	61.217***	1.909***	2.228***	7.451***	8.110***	0.051
	(4.328)	(3.674)	(0.469)	(0.746)	(2.106)	(1.625)	(0.078)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Adj. R^2	0.098	0.162	0.043	0.044	0.018	0.117	0.009

Panel B: Early Experience

	(1) Banking	(2) Military	(3) Consulting	(4) Politics	(5) First Private	(6) Top Ten	(7) First Sales
Recession	-0.007	-0.006	-0.025*	-0.001	0.043*	-0.031**	-0.290**
	(0.020)	(0.016)	(0.014)	(0.012)	(0.023)	(0.014)	(0.124)
Constant	0.001	0.096	0.002	0.048	0.282***	-0.080***	5.797***
	(0.002)	(0.064)	(0.002)	(0.047)	(0.099)	(0.018)	(0.743)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	No	No	Yes	Yes
Obs.	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Adj. R^2	0.001	0.052	0.003	0.001	0.000	0.204	0.043

Notes: The sample is the CEO-level dataset as described in subsection II.A and Table I. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales is log transformed. Decade fixed effects are based on the decade the individual was born in. Industry fixed effects are one-digit SIC dummies for the industry the individual started his career in; we code consulting and law firms as separate industries. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table IV: Recession and Type of Firm at Which Became CEO

	(1) Sales of Firm at Which CEO	(2) ROA of Firm at Which CEO	(3) Tobin's Q of Firm at Which CEO	(4) CEO First Comp. incl. Option Grants	(5) CEO First Comp. incl. Options Exercised	(6) CEO First Comp. incl. Option Grants	(7) CEO First Comp. incl. Options Exercised
Recession	-0.234**	0.002	-0.290	-0.118	-0.185**	-0.072	-0.117*
	(0.112)	(0.007)	(0.208)	(0.073)	(0.078)	(0.062)	(0.066)
Assets						0.176***	0.169***
						(0.026)	(0.027)
Sales						0.218***	0.259***
						(0.030)	(0.030)
ROA						0.131***	0.196*
						(0.040)	(0.101)
Constant	6.981***	0.135***	0.568*	6.540***	6.498***	3.701***	3.410***
	(0.822)	(0.036)	(0.296)	(0.434)	(0.401)	(0.382)	(0.331)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,566	1,511	1,536	1,715	1,764	1,715	1,764
Adj. R^2	0.021	0.034	0.018	0.022	0.015	0.263	0.280

Notes: The sample is the CEO-level dataset as described in subsection II.A and Table I. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales, assets and CEO compensation are all log-transformed. Decade fixed effects are based on the decade the individual was born in. Industry fixed effects are one-digit SIC dummies for the industry the individual started his career in; we code consulting and law firms as separate industries. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table V: Starting Firm Effects

Panel A: Career Path

	(1) Time to CEO	(2) Age to CEO	(3) Num Industries	(4) Num Firms	(5) Num Positions	(6) Av Tenure	(7) Founder
Top Ten	3.066***	0.678	0.681***	0.831***	1.098***	-0.631***	-0.074***
	(0.745)	(0.603)	(0.093)	(0.133)	(0.358)	(0.222)	(0.023)
Constant	35.136***	61.400***	1.979***	2.310***	7.595***	8.009***	0.045
	(4.314)	(3.669)	(0.467)	(0.744)	(2.096)	(1.622)	(0.077)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Adj. R^2	0.101	0.161	0.076	0.062	0.022	0.118	0.013

Panel B: Type of Firm at Which Became CEO

	(1) Sales of Firm at Which CEO	(2) ROA of Firm at Which CEO	(3) Tobin's Q of Firm at Which CEO	(4) CEO First Comp. incl. Option Grants	(5) CEO First Comp. incl. Options Exercised	(6) CEO First Comp. incl. Option Grants	(7) CEO First Comp. incl. Options Exercised
Top Ten	0.345*	-0.005	1.125	0.197*	0.042	0.155*	0.017
	(0.180)	(0.013)	(0.792)	(0.112)	(0.120)	(0.088)	(0.090)
Assets						0.177***	0.169***
						(0.026)	(0.027)
Sales						0.217***	0.260***
						(0.030)	(0.030)
ROA						0.128***	0.194*
						(0.040)	(0.101)
Constant	7.003***	0.135***	0.637**	6.571***	6.531***	3.722***	3.421***
	(0.817)	(0.036)	(0.290)	(0.432)	(0.398)	(0.383)	(0.332)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,566	1,511	1,536	1,715	1,764	1,715	1,764
Adj. R^2	0.021	0.034	0.027	0.023	0.012	0.264	0.278

Notes: The sample is the CEO-level dataset as described in subsection II.A and Table I. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales, assets and CEO compensation are all log-transformed. Decade fixed effects are based on the decade the individual was born in. Industry fixed effects are one-digit SIC dummies for the industry the individual started his career in; we code consulting and law firms as separate industries. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table VI: Recession and Management Style

Panel A: Recession Effects on Investment, Financial and Tax Policies

	Investment Policy			Financial Policy					Tax Policy
	(1) Capex	(2) R&D	(3) M&A	(4) Leverage	(5) Interest Coverage	(6) Cash Holdings	(7) Working Capital	(8) Dividends	(9) Effective Tax Rate
Recession	-0.007***	-0.002*	-0.014	-0.010**	0.077*	-0.011*	-0.027***	-0.004	0.042***
	(0.002)	(0.001)	(0.068)	(0.004)	(0.042)	(0.006)	(0.007)	(0.004)	(0.007)
Cash Flows	0.128***	-0.061***	-0.352	-0.241***		0.415***	0.456***		
	(0.008)	(0.013)	(0.250)	(0.017)		(0.045)	(0.049)		
Lagged Tobin's Q	0.013***								
	(0.001)								
ROA		0.082***	1.908***	-0.049***		0.112**	0.398***		
		(0.012)	(0.259)	(0.015)		(0.045)	(0.049)		
Lagged Assets			0.173***	0.004***	0.001			0.002**	0.047***
			(0.024)	(0.002)	(0.015)			(0.001)	(0.002)
TLCF									-0.030***
									(0.005)
Constant	0.078***	0.029***	0.356*	0.164***	2.528***	0.120***	0.206***	0.037***	-0.071
	(0.010)	(0.002)	(0.191)	(0.024)	(0.439)	(0.015)	(0.041)	(0.011)	(0.076)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	35,223	37,225	12,538	36,234	30,916	37,209	37,035	37,233	33,030
Adj. R^2	0.539	0.772	0.219	0.623	0.516	0.533	0.646	0.503	0.249

Panel B: Recession Effects on Organizational Strategy, Financial Reporting, Firm Risk, and Operating Performance

	Organizational Strategy			Financial Reporting		Firm Risk	Performance			
	(1) Diversification	(2) SG&A	(3) Profit Margin	(4) Earnings Management	(5) Earnings Persistence	(6) Return Volatility	(7) Long-Term Assets	(8) Asset Turnover	(9) ROA	(10) OROA
Recession	0.437***	-0.020***	0.010*	0.134***	-0.062***	-0.032***	0.014**	-0.084***	-0.009**	-0.007**
	(0.126)	(0.006)	(0.005)	(0.026)	(0.023)	(0.012)	(0.007)	(0.022)	(0.004)	(0.003)
ROA		0.397***								
		(0.029)								
Cash Flows		-0.021								
		(0.026)								
Sales									0.001	0.001
									(0.002)	(0.002)
Constant	-1.546	0.281***	0.146***	0.925***	0.643***	-3.759***	0.584***	1.856***	0.206***	0.125***
	(1.120)	(0.044)	(0.008)	(0.073)	(0.080)	(0.057)	(0.021)	(0.102)	(0.022)	(0.015)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	38,907	37,206	38,391	23,309	20,117	36,635	35,613	37,510	37,077	37,175
Adj. R^2	0.307	0.782	0.508	0.357	0.425	0.504	0.521	0.711	0.409	0.345

Notes: The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. We only include CEOs who have been in their position at a firm for at least three years; and we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. Our final sample includes 4,152 CEOs. Financial information of those firm-year observations is obtained from Compustat; data on mergers and acquisitions is obtained from SDC Platinum; and data on stock returns is obtained from CRSP. Details on the definition and construction of the variables reported in the table are available in Appendix B; summary statistics are presented in Appendix C. Decade fixed effects are based on the decade the individual was born in. Robust standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Appendix: Variable Definitions

Appendix A: Variables Related to CEO Careers

Recession	A dummy for whether the individual's first job was started in a recession
Time to CEO	Number of years between the earliest year in which the individual was CEO and the year in which the individual started his career
Age to CEO	Age at which the individual first became CEO
Num Industries	Number of industries a manager was employed in before becoming CEO for the first time
Num Firms	Number of firms a manager was employed in before becoming CEO for the first time
Num Positions	Number of positions the individual held before becoming CEO for the first time
Av Tenure	Number of years a manager stayed in a given position, averaged over all positions before becoming CEO for the first time
Founder	A dummy for whether the CEO is the founder of the firm
Banking	A dummy for whether the individual had any experience in a banking firm before becoming CEO for the first time
Military	A dummy for whether the individual had any military experience before becoming CEO for the first time
Consulting	A dummy for whether the individual had any experience in a consulting firm before becoming CEO for the first time
Law	A dummy for whether the individual had any experience in a law firm before becoming CEO for the first time
Politics	A dummy for whether the individual held any political office before becoming CEO for the first time
University	A dummy for whether the individual had any academic experience before becoming CEO for the first time
First Private	A dummy for whether the first job the individual held was in a private firm
Top Ten	A dummy for whether the first job the individual held was in a firm that ranks within the top ten firms from which CEOs come
First Sales	Sales of the first public firm the individual worked at, measured in the year the individual joined that firm
Sales of Firm at Which CEO	Sales of the firm at which the manager became CEO, measured in the year before the CEO starts the position
ROA of Firm at Which CEO	ROA of the firm at which the manager became CEO, measured in the year before the CEO starts the position
Tobin's Q of Firm at Which CEO	Tobin's Q of the firm at which the manager became CEO, measured in the year before the CEO starts the position
CEO First Comp. incl. Option Grants	Total value of a manager's compensation package including option grants for the year when the manager became CEO (tdc1)
CEO First Comp. incl. Options Exercised	Total value of a manager's compensation package including options exercised for the year when the manager became CEO (tdc2)

Appendix B: Variables Related to CEO Management Style

Capex	Capital expenditures (capx) over lagged total assets (at)
R&D	R&D expenditures (xrd) over lagged total assets (at)
M&A	Total number of acquisitions in the fiscal year (data obtained from SDC)
Leverage	Long-term debt (dltt) plus debt in current liabilities (dlc) over the market value of assets, where the market value of assets equals the book value of assets (at) plus the market value of common equity (prcc_f*csho) less the sum of the book value of common equity (ceq) and balance sheet deferred taxes (txdb)
Interest Coverage	Natural logarithm of the ratio of earnings before depreciation, interest, and tax (ebitda) over interest expenses (xint)
Cash Holdings	Cash and short-term investments (che) over lagged total assets (at)
Working Capital	Current assets (act) minus current liabilities (lct) over lagged total assets (at)
Dividends	The sum of common dividends (dvc) and preferred dividends (dvp) over earnings before depreciation, interest, and tax (ebitda)
Effective Tax Rate	Cash tax paid (txpd) over pre-tax book income (pi) before special items (spi)
Diversification	Total number of business segments
SG&A	Selling, general, and administrative expenses (xsga) over lagged total assets (at)
Profit Margin	Earnings before depreciation, interest, and tax (ebitda) over sales (sale)
Earnings Management	The standard deviation of the firm-level residuals from the modified Dechow and Dichev (2002) model over the previous five years, scaled by the average of the absolute value of working capital accruals over that period; the model is a regression of working capital accruals on past, current and future operating cash flows plus the change in revenue and PP&E; all variables are scaled by average total assets; the model is estimated cross-sectionally for each industry with at least 20 observations in a given year based on the Fama and French (1997) 48-industry classification
Earnings Persistence	The slope coefficient from a regression of current earnings (epsfx/ajex) on lagged earnings over a rolling ten-year window
Return Volatility	Natural logarithm of the standard deviation of daily stock returns over the fiscal year
Long-Term Assets	Total long-term assets (at - act) over lagged total assets (at)
Asset Turnover	Sales (sale) over lagged total assets (at)
ROA	Earnings before depreciation, interest, and tax (ebitda) over lagged total assets (at)
OROA	Cash flow (ib + dp) over lagged total assets (at)
Assets	Natural logarithm of total assets (at)
Sales	Natural logarithm of sales (sale)
Cash Flows	The sum of earnings before extraordinary items (ib) and depreciation (dp) over lagged total assets (at)
Tobin's Q	The market value of assets (at + prcc_f*csho - ceq - txdb) divided by the book value of assets (at)
TLCF	A dummy for whether the firm has a positive value of tax loss carry-forward (tlcf)

Appendix C: Summary Statistics of Variables Related to CEO Management Style

	Obs.	Mean	Median	SD
Capex	37,751	0.080	0.056	0.085
R&D	37,754	0.038	0.000	0.075
M&A	12,851	1.823	1.000	1.386
Leverage	37,287	0.157	0.122	0.149
Interest Coverage	31,939	2.419	2.183	1.358
Cash Holdings	37,695	0.184	0.080	0.290
Working Capital	37,519	0.289	0.248	0.365
Dividends	38,637	0.076	0.022	0.117
Effective Tax Rate	34,169	0.217	0.206	0.208
Diversification	38,907	2.500	1.000	2.997
SG&A	37,749	0.295	0.235	0.268
Profit Margin	38,391	0.133	0.133	0.217
Earnings Management	23,309	1.002	0.875	0.632
Earnings Persistence	20,117	0.527	0.533	0.453
Return Volatility	36,635	-3.653	-3.674	0.447
Long-Term Assets	35,613	0.597	0.556	0.314
Asset Turnover	37,510	1.392	1.203	0.935
ROA	37,407	0.169	0.160	0.137
OROA	37,550	0.107	0.109	0.120
Assets	37,565	6.394	6.384	1.792
Sales	38,503	6.441	6.452	1.782
Cash Flows	37,550	0.107	0.109	0.120
Tobin's Q	35,463	1.950	1.499	1.372
TLCF	39,034	0.267	0.000	0.442

Notes: The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. We only include CEOs who have been in their position at a firm for at least three years; and we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. Our final sample includes 4,152 CEOs. Financial information of those firm-year observations is obtained from Compustat; data on mergers and acquisitions is obtained from SDC Platinum; and data on stock returns is obtained from CRSP. Details on the definition and construction of the variables reported in the table are available in Appendix B.