

Executive's Education and Performance of REITs

Shicheng Tang

A Thesis

In

The John Molson School of Business

Presented in Partial Fulfillment of the Requirements

for the Degree of Master of Sciences (Finance) at

Concordia University

Montreal, Quebec, Canada

July 2020

© Shicheng Tang, 2020

**CONCORDIA UNIVERSITY**  
**School of Graduate Studies**

This is to certify that the thesis prepared

By: Shicheng Tang

Entitled: Executive's Education and Performance of REITs

and submitted in partial fulfillment of the requirements for the degree of

**Master of Science (Finance)**

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final Examining Committee:

\_\_\_\_\_ Chair

*Chair's name*

\_\_\_\_\_ Examiner

*Dr. Chongyu Wang*

\_\_\_\_\_ Examiner

*Dr. Yu Shan*

\_\_\_\_\_ Supervisor

*Dr. Erkan Yönder*

Approved by \_\_\_\_\_

Dr. Nilanjan Basu, Graduate Program Director

\_\_\_\_\_  
Dr, Kathleen Boies, Dean of Faculty

Date July 28, 2020 \_\_\_\_\_

## **ABSTRACT**

### **Executive's Education and Performance of REITs**

Shicheng Tang

Top executives with business decision-making power, including CEO, CFO and COO, are the core of a company's business activities, their business decisions influenced by their own abilities will naturally affect the company performance. As an expected proxy of executive's ability, this paper focuses on the executive's education, and studies the impact of executive's education on the performance of REITs by using the data of executive's education and financial performance of 288 U.S. REITs companies from 2000 to 2018. As for the results of the empirical examinations, this paper finds that, first, there is no significant relationship between executive's individual education and the performance of REITs. However, executive's high individual education has a significantly negative impact on the performance of REITs if there is enough discretionary cash. Second, as for the executive team of CEO and CFO, there is a significantly positive impact of the education of executive team in which CEO has no high education and CFO has high education on the performance of REITs. Finally, as for the executive team of CEO, CFO and COO, there is a significantly positive impact of the education of executive team in which CEO has no high education and at least one of CFO and COO has high education on the performance of REITs, and the best executive team with greater positive impact on the performance of REITs is the one in which CEO has no high education and one of CFO and COO has high education.

Key Words: company performance, REITs, executive's education, overconfidence

## **Acknowledgements**

First, I would like to express my most sincere gratitude to my supervisor, Professor Erkan Yönder, who has been guiding and supporting me in the process of working on the thesis, for his boundless patience, motivation, insightful suggestions and profound knowledge.

In addition, I would also like to express my gratitude to the committee members, Professor Chongyu Wang and Professor Yu Shan, for their insightful suggestions on the improvement of the thesis.

Moreover, I'm grateful to my parents and family for giving me their warm love, confidence, and encouragement in my study, and heartfelt gratefulness for their continuous support in my working on thesis.

## Table of Contents

List of Figures and Tables.....	vii
1. Introduction.....	1
2. Literature Review.....	6
2.1 Insignificant Relationship Between CEO’s Individual Education and Company Performance.....	6
2.2 Positive Relationship Between CEO’s Individual Education and Company Performance...	7
2.3 Puzzled Results.....	8
2.4 Negative Relationship Between CEO’s Individual Education and Company Performance..	9
3. Research Background and Hypothesis.....	11
4. Data and Method.....	18
4.1 Data.....	18
4.1.1 Data Resources.....	18
4.1.2 Variables Description.....	18
4.1.2.1 Measures of Executive’s Employment and Education.....	19
4.1.2.2 Measures of performance of REITs.....	20
4.1.2.3 Financial Control Variables.....	21
4.1.3 Statistical Description.....	21
4.2 Method.....	22
4.2.1 Examination of the Relationship between Executive’s Individual Education and the Performance of REITs.....	23
4.2.2 Examination of the Relationship between the Education of Executive Team and the Performance of REITs.....	24
4.2.2.1 Examination of the Relationship between the Education of Executive Team of CEO and CFO and the Performance of REITs.....	25
4.2.2.2 Examination of the Relationship between the Education of Executive Team of CEO, CFO and COO and the Performance of REITs.....	27
5. Results of Empirical Examinations.....	30

5.1 Results of the Examination of the Relationship between Executive’s Individual Education and the Performance of REITs.....	30
5.2 Results of the Examination of the Relationship between the Education of Executive Team and the Performance of REITs.....	32
5.2.1 Results of the Examination of the Relationship between the Education of Executive Team of CEO and CFO and the Performance of REITs.....	32
5.2.2 Summary of the Results of Model 1 to Model 5.....	36
5.2.3 Results of the Examination of the Relationship between the Education of Executive Team of CEO, CFO and COO and the Performance of REITs.....	38
6. Conclusion and Discussion.....	43
Reference.....	46
Appendices.....	48

## List of Figures and Tables

Figure 1 .....	48
Figure 2 .....	49
Figure 3 .....	50
Figure 4 .....	51
Table 1 .....	52
Table 2 .....	53
Table 3 .....	54
Table 4 .....	55
Table 5 .....	56
Table 6 .....	57
Table 7 .....	58
Table 8 .....	59
Table 9 .....	60

## 1. Introduction

One of the most important purposes of a company's business activities carried out by executives is to achieve a better company performance. It is precisely for this reason that many studies in the field of modern corporate finance focus on the topic related to the improvement of company performance, and concentrate on the factors that significantly positively affect the company performance.

Meanwhile, when it comes to the factors that affect the company performance, top executives, as the core of a company's management and business activities, are expected to affect the company performance by their abilities. Specifically, they are the ones who have dominant power of business decisions-making, and generally they manage the company and make business decisions by using their own abilities. Therefore, the abilities of company's top executives play an important role in the quality of management and business decisions which will be reflected in company performance, that is, the abilities of company's top executives are expected to have significant impact on company performance.

As for the executive's ability, it may be jointly affected by many factors, such as education, working experience, leadership ability and personality characteristics. As mentioned in the study of Bhagat, Bolton and Subramanian (2010), it is not easy to accurately measure these factors, however, comparing with other factors, the measuring of executive's individual education should be relatively easier and more accurate, since executive's individual education can be observed directly and precisely. In addition, some previous studies, like Barro and Lee (2010) and Cohen and Soto (2007), consider the educational attainment as a reasonable proxy for the stock of human capital.

Therefore, precisely because of the direct and accurate measuring of executive's individual education, and also the views of previous studies that consider education as a proxy of the stock of human capital, many following studies consider executive's individual education as a proxy of executive's ability and expect that executives with higher education have higher individual abilities. These studies focus on the relationship between the top executive's individual education, mainly CEO, and top executive's hiring, turnover, and company performance, and hypothesize that CEO's individual educational characteristics have significant impact on company performance.

As measuring the CEO's educational characteristics which are considered as the proxies of CEO's ability, previous studies use some observed CEO's individual educational information as the measures of CEO's individual education, such as the ranking of schools, educational qualifications and degrees and also professional expertise.

In the conclusion, these previous studies find mixed results of the impact of CEO's



individual education on company performance.

Some previous studies find no significant impact of CEO's individual education on company performance. Bhagat, Bolton and Subramanian (2010) find that CEO's individual education significantly affects CEO's hiring decisions, however, there is no significant impact of CEO's individual education on long-term company performance. Moreover, Gottesman and Morey (2006) focus on the quality of CEO's individual education and the company performance. The results show that there is no significant relationship between CEO's individual educational quality and the company performance, and also no significant relationship between CEO's individual educational qualification and the company performance. In addition, they also find that CEOs with non-MBA and non-law graduate degrees slightly perform better than their counterparts.

However, there are some opposite results in other studies. Jalbert, Rao and Jalbert (2002) focus on the largest U.S. firms and find that both CEO's university and degree significantly affect the company performance. Darmadi (2013) examines the impact of individual educational qualification of board members, including CEO, on company performance and finds that the company performance can be explained by CEO's individual educational qualification. In addition, Wai and Rindermann (2015) find that the higher CEO's individual education and cognitive ability have positive impact on gross revenue of company. Bertrand and Schoar (2003) examine whether and how individual managers affect the corporate behavior and performance, and suggest that the manager's MBA degree has positive impact on manager's performance.

Based on the previous studies, from more different and new perspectives and aspects, this paper focuses on the relationship between executive's education and the company performance of U.S. REITs, and empirically examines the impact of executive's high education on performance of REITs.

First of all, regarding the industry studied, this paper focuses on the industry of real estate. Specifically, for more available observations of executive's individual education and the financial performance of company, and also for more accurate empirical examinations, this paper focuses on the Real Estate Investment Trusts (REITs). This paper directly focuses on the impact of executive's education on performance of REITs, and therefore effectively analyses the relationship between executive's education and the performance of REITs.

REITs is an industry that operates more specialized business and primarily invests in real estate projects. As mentioned in Eichholtz and Yonder (2014), REITs companies almost invest all their assets in the projects of real estate, in other words, the performance of REITs can be accurately reflected by the overall profitability of REITs investments in real estate projects.

Moreover, as the predominantly business activity, the executives in REITs are mainly focused on making business decisions related to the real estate projects. Therefore, it can be expected that the performance of REITs that can be reflected by the profitability of the real estate projects invested by REITs is a comprehensive and accurate reflection of REITs executives' abilities, as measured by executives' individual education.

In addition, Eichholtz and Yonder (2014) also mention that, as the advantage for a more accurate and comprehensive empirical analysis, the investment and divestment activities of

REITs and the value of all the assets held by REITs can be observed with precision.

Second, regarding the empirical examinations of the impact of executive's education on performance of REITs in this paper, first, this paper uses the data of executive's education and the financial performance of 288 U.S. REITs companies from 2000 to 2018. In addition, to examine whether executive's higher education positively affect the performance of REITs, based on the ranking of schools, this paper divides REITs executives in sample into two categories, that are, executives who graduated from Top 20 schools and from the schools after Top 20. Then, this paper defines "high education" of REITs executives as the education of Top 20 schools.

Third, and more importantly, based on the previous studies, this paper tries to make contribution and some improvements of empirical analysis related to the impact of executive's education on performance of REITs, specifically, this paper employs the empirical analysis in two parts.

The first part of empirical analysis is the examination of the relationship between executive's individual education and the performance of REITs, that is, to examine whether executive's high individual education positively affect the performance of REITs.

As for the company's executives, it can be noted that, most of previous studies mainly analyze the relationship between CEO's individual education and the company performance. However, except for the CEOs, who have the dominant business decision-making power, are expected to affect the company performance by the business decisions they make based on their abilities, other top executives, such as the CFOs and COOs, also have important business decision-making power and frequently participate in company's management and business activities, they are also expected to affect the company performance by their business decisions based on their abilities. Therefore, this paper not only focuses on the CEO's individual education, but also considers the impact of the CFO's individual education on performance of REITs.

In summary, in the first part of empirical analysis, as for the examination of the impact of executive's individual education on performance of REITs, this paper focuses on CEO's and CFO's individual education, and examines whether there is a significant relationship between CEO's and CFO's individual education and the performance of REITs, respectively.

Moreover, based on the first part of empirical analysis, this paper makes some improvements of the empirical analysis by employing the second part of empirical analysis. Specifically, in this part, this paper studies the joint impact of executives' education on performance of REITs. As mentioned above, most of previous studies focus on the impact of executive's individual education on company performance, however, the company's top executives frequently cooperate with each other in company's business activities. It is expected that, as an executive team, the combination of their education affects the company performance by the business decisions that executives make based on their own knowledge and abilities. Therefore, this paper examines the relationship between the education of executive teams with different combinations of executive's individual education and the performance of REITs, and tries to find a best executive team of which the combination of executive's individual education has a greater positive impact on performance of REITs, comparing with other executive teams with different combinations of executive's individual education.

Based on this view of point, in the second part of empirical analysis, there will be a two-step examination. In the first step, this paper examines the relationship between the joint education of executive team of CEO and CFO and the performance of REITs. Specifically, this paper views CEO and CFO, two of the most important executives in the top executive team, as an executive team. Then, this paper divides the executive team of CEO and CFO into three categories, based on the different combinations of executive's individual education. First, the executive team of CEO and CFO, which is called "CEO Leadership", represents the executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education. The executive team of "CEO Leadership" comprehensively displays the leadership skill for a CEO, as a CEO with lower education leads executives with high education. Second, the executive team of CEO and CFO, which is called "Team Top 20", represents the executive team of CEO and CFO in which both CEO and CFO have Top 20 school education. The executive team of "Team Top 20" effectively shows the high-educated cooperation among executives in the executive team, as a CEO with high education leads executives with similar high education. Third, the executive team of CEO and CFO, which is called "Dominant CEO", represents the executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education. The executive team of "Dominant CEO" directly shows the CEO's dominant role in the executive team, as a CEO with high education leads executives with lower education. In summary, as mentioned above for the three categories of executive team of CEO and CFO, as an improvement of empirical analysis, this paper examines the relationship between the joint education of executive team of CEO and CFO and the performance of REITs by focusing on the impact of different cooperative relationships within the executive team based on the different executives' positions that are affected by different combinations of executive's individual education on performance of REITs.

In the second step, as a robustness examination, this paper also examines the relationship between the joint education of executive team of CEO, CFO and COO and the performance of REITs.

Specifically, there are two examinations in the second step. First, for a more general examination, this paper examines the relationship between the education of executive team in which, regardless of the education of CEO, there may be zero, one or two of CFO and COO with Top 20 school education and the performance of REITs. Second, for a more comprehensive and accurate examination, similar to the examination of the impact of the education of executive team of CEO and CFO on performance of REITs, this paper also divides the executive team of CEO, CFO and COO into three categories, based on the different combinations of executive's individual education, and uses a stricter criterion of the education of CEO to examine the relationship between the joint education of executive team of CEO, CFO and COO and the performance of REITs. To be specific, by assuming that CEO has no Top 20 school education, this paper examines the relationship between the education of executive team of CEO, CFO and COO in which there is one, two or at least one of CFO and COO with Top 20 school education and the performance of REITs.

Using this two-step examination in the second part of empirical analysis, this paper tries to

find the best educational combination of executive team that has greater positive impact on performance of REITs.

In addition, for both the empirical examinations of “individual education” and “joint education of executive team”, this paper also examines the interactive impact of “executive’s education” and “cash holdings”, as mentioned by Eichholtz and Yonder (2014) who focus on the impact of manager’s overconfidence on company performance, they examine the interactive impact of overconfidence and cash on performance of REITs, and find that cash significantly affects company performance by influencing manager’s investment behavior. Therefore, it is expected that cash holdings affect the business decision-making of executives with different management styles based on different education.

This paper uses the data of executive’s education and the financial performance of 288 U.S. REITs companies from 2000 to 2018, and applies OLS (Ordinary Least Squares) models to examine the following questions. First, the relationship between executive’s (CEO and CFO) individual education and the performance of REITs. Second, the relationship between the education of executive team of CEO and CFO and the performance of REITs. Third, the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. Fourth, is there a best executive team of which the combination of executive’s individual education can perform a better performance of REITs.

Following the empirical examinations, this paper finds that, first, there is no significant relationship between CEO’s individual education and the performance of REITs, while CFO’s individual education has a relatively significant impact on performance of REITs. However, as considering the interactive impact of executive’s individual education and cash holdings, there is significantly negative impact of executive’s (CEO and CFO) high individual education on performance of REITs, if there is enough discretionary cash. Second, there is a significantly joint impact of the education of executive team of CEO and CFO on performance of REITs, specifically, there is a significantly positive impact of the education of executive team of CEO and CFO in which CEO has no high education and CFO has a high education on performance of REITs. Third, there is a significantly positive impact of the education of executive team of CEO, CFO and COO in which CEO has no high education and at least one of CFO and COO has high education on performance of REITs. Fourth, the best executive team that has greater positive impact on performance of REITs is the one in which CEO has no high education and one of CFO and COO has high education.

The paper is arranged as follows. The second part is Literature Review, the third part is Research Background and Hypothesis. The fourth part is Data and Method, the fifth part is Results of Empirical Examinations, and the sixth part is Conclusion and Discussion.

## **2. Literature Review**

Top executives who are the core of a company's business activities normally make business decisions and manage the company based on their own abilities that can be jointly affected by different factors, such as knowledge, expertise, work experience, insights, leadership ability and personality characteristics. As for executive's education, many previous studies focus on the relationship between the individual education of CEO, who has the dominant business decision-making power and is considered as the most important executive in the company, and the company performance.

To be specific, as for empirical examinations of the relationship between CEO's individual education and the company performance, they consider some measures, including the ranking of schools, educational qualifications and degrees and professional expertise, as the proxies of the CEO's individual educational characteristics, and then employ models to empirically examine the impact of CEO's individual education on company performance, in other words, whether the higher individual education of CEO positively affects company performance. Among these related previous studies, in the conclusion, there are mixed results of the impact of CEO's individual education on company performance, and in some studies, there are also some puzzled results when using different measures of CEO's individual education and company performance, and different periods.

### **2.1 Insignificant Relationship Between CEO's Individual Education and Company Performance**

As for mixed results, some previous studies find that there is no significant relationship between CEO's individual education and the company performance.

Bhagat, Bolton and Subramanian (2010) focus on the impact of CEO's individual education, they consider that CEO's ability consists of observable and quantifiable factors, such as education and work experience, and also unobservable and potentially non-quantifiable factors, such as leadership and team-building skills. Therefore, as an objective and easily measurable factor, education can be expected to play an important role in the evaluation of CEO's ability and then, CEO's hiring and company performance. They use some measures of CEO's education, including the ranking of schools, qualifications and degrees, and firstly examine whether CEO's individual education is one of the appropriate measures of the evaluation of CEO's ability, then also examine whether CEO's individual education has a significant impact on CEO's hiring,

turnover decision and company performance. In the conclusion, they find that CEO's individual education significantly affects CEO's hiring decisions, however, there is no significant relationship between CEO's individual education and the long-term company performance.

Arioglu (2014) investigates the relationship between the education and the professional expertise of directors in listed firms of Borsa Istanbul and director's valuation. It showed that, comparing with the directors with lower educational qualifications and with no professional expertise, there is a higher proportion of directors with higher educational qualifications or professional expertise, such as accounting, are employed in board committees, and also assigned as independent directors. However, as for the CEO or the chairman of company, there is a lower proportion of directors with higher educational qualifications or professional expertise work in these positions. They suggest that the educational level and professional skills are more important in valuing the directors of board committees, but not in valuing the top executives, such as CEO and chairman.

Gottesman and Morey (2006) examine the relationship between CEO's educational quality and the company performance, and also the relationship between CEO's qualification and the company performance. They consider CEO's educational quality as a factor that affects company performance because some studies assume that managers with higher education will be more adaptive and innovative, and more likely to have other characteristics that may improve the company performance. In the conclusion, they find that, first, as viewing the mean entrance score as the proxy of the prestige of undergraduate and graduate programs, companies with CEOs from more prestigious schools will not significantly perform better than companies with CEOs from less prestigious schools. Second, as for CEO's qualification, companies with CEOs who have MBA or law degrees will not significantly perform better than companies with CEOs who have no graduate degrees. Moreover, companies with CEOs who have non-MBA and non-law graduate degrees slightly perform better than other companies.

Although the studies above find no significant relationship between CEO's individual education and the company performance, they suggest that educational quality, qualification and professional expertise are important in valuing and hiring CEO and other executives, in other words, education is one of the most important factors in measuring executive's ability.

## **2.2 Positive Relationship Between CEO's Individual Education and Company Performance**

In contrast, some studies find that there is significantly positive relationship between CEO's individual education and the company performance.

Bertrand and Schoar (2003) investigate whether and how individual managers affect company behavior and performance. They use a manager-firm matched panel data and find that the heterogeneity in investment, financial, and organizational practices of company can be significantly explained by manager's fixed effect. Moreover, there is a significant relationship

between management style, which is different across managers, and the manager's fixed effect, which is related to the company performance, measured by Return on Assets (ROA) and Tobin's Q. Then, as for the manager's educational characteristics, they find that, as measured by ROA, the performance of manager with an MBA degree will be 1% higher than that of manager without an MBA degree, and manager who has an MBA degree generally more aggressive on business strategies.

King, Srivastav and Williams (2016) use a data of U.S. bank that matches CEO's educational characteristics and firm-specific experience with CEO's compensation and other bank characteristics, and find that CEO's educational fixed effect is associated with the bank performance. Moreover, the profitability of the banks with CEOs who have better MBA scores is significantly higher than that of the banks with non-MBA CEOs. Based on the results, they consider that the riskier and more innovative business mode that CEOs with better MBA education tend to employ positively affects the company performance.

Darmadi (2013) focuses on the developing economy and examines the impact of educational qualifications of board members, including CEO, on performance of Indonesian listed firms, as measuring the company performance by Tobin's Q and Return on Assets (ROA). Darmadi (2013) uses postgraduate degrees, degrees obtained from prestigious universities, degrees obtained from developed countries, and degrees in financial disciplines as the proxies of educational qualifications of board members and employs the models for the supervisory boards, management boards, and CEOs, respectively. In the result, Darmadi (2013) finds that the educational qualifications of board members and CEOs are associated with the company performance.

Wai and Rindermann (2015) examine the extent to which Fortune 500 CEOs were selected on education and cognitive ability from 1996 to 2014. They find that between 37.5% and 41.0% of CEOs in sample had attended an elite school which is likely the reason that promotes them to be the ones with top 1% of cognitive ability. In addition, they also examine the relationship between CEO's individual education and the company financial performance, and find that the higher CEO's education and cognitive ability have positive impact on gross revenue of company.

Girbina, Albu, C. N. and Albu, N. (2012) focus on listed companies of Romania and find that there is a significantly positive relationship between the proportion of board members with a postgraduate degree in financial field and the company performance, as measured by Tobin's Q. In addition, they also find that there is a higher proportion of board members with a degree in financial field in bigger companies and companies with more concentrated ownership.

## **2.3 Puzzled Results**

Except for the studies that suggest the positive impact of CEO's individual education on company performance, some other studies find that there is negative impact of CEO's individual

education on company performance, and also find puzzled results when using different measures of CEO's individual education and company performance, and different periods.

Jalbert, Rao and Jalbert (2002) examine the individual education of CEOs from the largest U.S. firms in the Forbes 800 Compensation list and find some mixed results of the relationship between CEO's individual education and the company performance. Specifically, they find that both CEO's university and degree can explain the company performance, as measured by Return on Assets (ROA) and Tobin's Q. As for ROA, there is no significant difference in ROA between the companies with CEOs from combined schools and the companies with CEOs from combined undergraduate schools, however, the companies with CEOs from Big graduate schools perform better ROA than other companies. Moreover, as for Tobin's Q, it shows that education is one of the most important explanatory variables of Tobin's Q, and CEOs from the schools of which many graduates work in the position of CEO are less likely to perform higher Tobin's Q than other CEOs.

Morresi (2017) analyzes the impact of CEO's individual education on performance of European listed companies and finds puzzled results of the relationship between CEO's individual education and the company performance. Specifically, there is no significant impact of the individual education of CEOs who are from higher ranking universities and with more qualifications on improving company performance. However, as using the 5-year changes of company performance, there is significantly higher improvement of company performance for companies which are managed by CEOs from higher ranking universities. Morresi (2017) considers that the results indicate that CEO's individual education is one of the methods for individual and institutional investors to reduce the information asymmetry of CEO's quality and ability.

## **2.4 Negative Relationship Between CEO's Individual Education and Company Performance**

As for the negative relationship between CEO's individual education and the company performance, Miller and Xu (2019) find that, comparing with non-MBA CEOs, CEOs with MBA degrees are better with business of short-term strategic expedients, however, these strategies have negative impact on company's market valuation.

In summary, all the previous studies above focus on the relationship between the CEO's individual education and the company performance. In the empirical examinations, as for the measures of executive's individual education, they use the ranking of schools, educational qualifications and degrees and professional expertise. As for the company performance, most of previous studies use Return on Assets (ROA) and Tobin's Q. In addition, many previous studies focus on the larger listed companies in stock exchange because the data of CEOs' individual



education and company financial performance are more readily available.

In the conclusion, previous studies find mixed results of the relationship between CEO's individual education and the company performance, as mentioned above. Some studies find that there is significantly or slightly significantly positive or negative relationship between CEO's individual education and the company performance, while others suggest that there is no significant relationship between CEO's individual education and the company performance, in addition, some studies find puzzled results when using different measures of CEO's individual education and company performance, and different periods.

In this paper, as mentioned above, it examines the relationship between executive's education and the performance of REITs by employing two parts of empirical examinations. First, it examines the relationship between executive's individual education and the performance of REITs. Second, it examines the relationship between the education of executive team of CEO and CFO, and CEO, CFO and COO, respectively, and the performance of REITs. In general, this paper examines whether the higher and better executive's education will positively affect the performance of REITs, and tries to find the best executive team of which the combination of executive's individual education has a greater positively impact on performance of REITs.

For establishing the models of empirical examinations, in the next part, this paper first observes and analyses the relationship between executive's education and the performance of REITs by using the charts showing the executive's education and the performance of REITs in sample.

### 3. Research Background and Hypothesis

As for the relationship between executive's education and the company performance, some previous studies consider that managers with higher education will be more adaptive and innovative, and more likely to have other characteristics that may improve the company performance, they suggest that high executive's education positively affects the company performance. Moreover, from another perspective, some studies support the view that the high-ranking schools that CEOs attend is the reason that promotes them to be the ones with top 1% of cognitive ability, and find that executive's high education and cognitive ability positively affect the company performance. However, other studies find that there is no significant relationship between executive's education and the company performance.

Specifically, in these empirical analyses, they use the ranking of schools, educational qualifications and degrees and professional expertise as the measures of executive's education, and use Return on Assets (ROA) and Tobin's Q as the measures of company performance.

Therefore, based on the previous studies and analysis ideas of this paper discussed in Introduction part, this part analyses the relationship between executive's education and the performance of REITs by using the following four charts showing executive's education and performance of REITs, based on the data of executive's education and financial performance of 288 U.S. REITs from 2000 to 2018, and puts forward some ideas and hypotheses for the relationship between executive's individual education and the performance of REITs, and also the relationship between the education of executive team and the performance of REITs, respectively.

**\*\*Insert Figure 1 about here\*\***

As shown in Figure 1, it shows executive's individual education and the average quarterly performance of 288 U.S. REITs in each year from 2000 to 2018, there are totally 19730 observations for the whole period in sample.

The bars in blue, orange and gray, called "Top 20 CEO", "Top 20 CFO", and "Top 20 COO", represent the proportion of CEO, CFO and COO who graduated from Top 20 schools in each year, respectively, the lines in yellow, blue and green represent the average value of quarterly performance of REITs, measured by Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity), of all companies in each year, respectively. The abscissa shows the year, the primary ordinate on the left shows the value of proportion of CEO, CFO and COO from Top 20 schools, and the secondary ordinate on the right shows the average value of performance of REITs.

From this chart, it can be seen that, except for the period from 2008 to 2012 (period of

financial crisis) in which the values of measures (Tobin's Q, ROA and ROE) of average performance of REITs are low, in other years, the values of measures of average performance of REITs remain at a relatively stable and increasing state.

As for the significant decrease of the average performance of REITs during financial crisis period, it is related to weak economic environment, the negative impact of financial crisis on performance of REITs is independent of the impact of executive's education on performance of REITs. Therefore, this paper examines the relationship between executive's education and the performance of REITs at the whole period level.

As shown in the chart, the average Tobin's Q, with the value range from 1.15 to 1.61, remains almost at a horizontal level during the whole period, the average ROA, with the value range from 2.47 to 5.44, remains at a relatively stable and increasing state, except for the period of financial crisis, and average ROE, with the value range from 6.01 to 12.48, shows a similar trend to that of ROA.

In addition, the proportions of CEO, CFO and COO with Top 20 school education slightly increase or decrease during the period. To be specific, the proportion of "Top 20 CEO", with the value range from 0.16 to 0.31, is always the highest among the proportions of these three positions. It increases slightly from 2000 to 2005, and remains at a horizontal level from 2006 to 2009, then, it shows a very small increase from 2010 to 2015, and decreases after 2015. Comparing with the proportion of "Top 20 CEO", the proportion of "Top 20 CFO", with the value range from 0.07 to 0.18, is in a state of steady and slightly increasing during the period. As for the proportion of "Top 20 COO", with the value range from 0.06 to 0.12, it changes more frequently, but slightly. It increases slightly from 2000 to 2003, and decreases from 2004 to 2006, then, it increases slowly and slightly from 2007 to 2014, and from 2015 to 2018, there is an obvious decline.

In addition, the proportion of "Top 20 CFO" is always lower than that of "Top 20 CEO", but higher than the proportion of "Top 20 COO". It may imply that, comparing with the position of COO, education is more important in the evaluation of executives working in the positions of CEO and CFO, when the board of directors hires executives for company.

In summary, Figure 1 preliminarily shows the general relationship between executive's individual education and the performance of REITs. Overall, as for the inconsistent trends between the proportions of CEO and COO with Top 20 school education and the average quarterly performance of REITs, and the slightly consistent trends between the proportion of CFO with Top 20 school education and the average quarterly performance of REITs, it can be expected that there is no significant or better relationship between the executive's individual education and the performance of REITs.

**\*\*Insert Figure 2 about here\*\***

Except for the executive's individual education, this paper also focuses on the joint education of the executive team. As two of the most important executives in the top executive

team, this paper first views CEO and CFO as an executive team, and divides the executive team of CEO and CFO into three categories, based on the different combinations of executive's individual education, to analyze the relationship between the joint education of executive team of CEO and CFO and the performance of REITs. Figure 2 shows the education of executive team of CEO and CFO and the average quarterly performance of 288 U.S. REITs in each year from 2000 to 2018.

Same with Figure 1, the lines in yellow, blue and green also represent the average value of quarterly performance of REITs, measured by Tobin's Q, ROA and ROE, of all companies in each year, respectively.

As for the education of executive team of CEO and CFO, the bars in blue, called "CEO Leadership", represent the proportion of the executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education in each year, as mentioned above, "CEO Leadership" comprehensively displays the leadership skill for a CEO, as a CEO with lower education leads executives with high education. The bars in orange, called "Team Top 20", represent the proportion of the executive team of CEO and CFO in which both CEO and CFO have Top 20 school education in each year, "Team Top 20" effectively shows the high-educated cooperation among executives in the executive team, as a CEO with high education leads executives with similar high education. The bars in gray, called "Dominant CEO", represent the proportion of the executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education in each year, "Dominant CEO" directly shows the CEO's dominant role in the executive team, as a CEO with high education leads executives with lower education.

As for the trends of the proportions of the executive team of CEO and CFO, the proportion of "CEO Leadership", with the value range from 0.03 to 0.12, is in a steady increase state during the whole period, and the increase is more significant after 2012. The proportion of "Team Top 20", with the value range from 0.04 to 0.06, changes very little during this period. It increases slightly from 2000 to 2005, after 2005, it declines significantly and reaches to its lowest value in 2011, then, it increases very slightly and almost remains at a horizontal level.

The proportion of "Dominant CEO", with the value range from 0.11 to 0.25, increases slightly from 2000 to 2006, and slightly decreases and remain in a stable state during 2007 to 2009, and then, increases slightly from 2010 to 2015, and after 2015, it decreases significantly.

The proportion of "Dominant CEO" is always the highest during the whole period, and then, the proportion of "CEO Leadership", and the proportion of "Team Top 20" is always the lowest. However, comparing with the increasing trends of the average quarterly performance of REITs, as the average value of ROA and ROE increase from 2012 to 2018, the proportion of "CEO Leadership" shows a similar significantly increasing trend, while the proportions of "Team Top 20" and "Dominant CEO" show inconsistent slightly decreasing or stable trends. As shown in Figure 2, it implies that although "Dominant CEO" always has the highest proportion among the three kinds of executive teams of CEO and CFO, "CEO Leadership" shows its increasing important role in the establishment of executive team, especially after 2012. Therefore, it can be expected that, comparing with the executive team of "Team Top 20" and "Dominant CEO", the

education of executive team of “CEO Leadership” has positive impact on performance of REITs. Specifically, comparing with the executive teams of “Team Top 20” and “Dominant CEO” which show the high-educated cooperation among executives with similar high education in the executive team and CEO’s dominant role in the executive team, respectively, the education of executive team of “CEO Leadership” which comprehensively displays the leadership skill for CEO is expected to positively affect the performance of REITs.

In summary, Figure 2 shows the relationship between the education of executive team of CEO and CFO and the performance of REITs, as shown in Figure 2, it can be expected that there is a positive relationship between the education of executive team of CEO and CFO in which CEO has no high education and CFO has high education and the performance of REITs.

As shown in Figure 1 and Figure 2, the proportions of “Top 20 CEO” and “Dominant CEO” are always the highest among the different groups in the charts. However, comparing with the increasing trend of the average quarterly performance of REITs, especially after 2012, the proportions of “Top 20 CEO”, “Top 20 CFO”, “Dominant CEO” and “Team Top 20” show inconsistently or slightly consistent trends with that of the average quarterly performance of REITs, while the proportion of “CEO Leadership” shows significantly consistent steady increasing trend.

As for some views of point about the overconfidence and REITs company performance from some studies, Mishra and Metilda (2015) find that the overconfidence increases with the level of education. In addition, Eichholtz and Yonder (2014) find that REITs with overconfident CEOs tend to invest more and show lower property investment performance. Therefore, it may imply that the board of directors not only focuses on the high individual ability that executives with high education may have, but also considers whether the executives’ management styles and cooperation of executives can improve the company performance. In addition, especially after the period of financial crisis, the board of directors tends to hire executives with more cautious management style.

In summary, Figure 1 and Figure 2 show the executive’s education at an executive individual level and an executive team level of CEO and CFO, respectively. As shown in Figure 1, it can be expected that there is no significant or better relationship between executive’s individual education and the performance of REITs. Meanwhile, as for the similar increasing trends between “CEO Leadership” and the average quarterly performance of REITs shown in Figure 2, it can be expected that there is a positive relationship between the education of executive team of CEO and CFO in which CEO has no high education and CFO has high education and the performance of REITs. Therefore, there are Hypothesis 1 and Hypothesis 2:

***Hypothesis 1:***

***There is no significant or better relationship between executive's individual education and the performance of REITs.***

***Hypothesis 2:***

***As considering the executive team of CEO and CFO, there is significantly positive relationship between the education of executive team of CEO and CFO in which CEO has no high education and CFO has high education and the performance of REITs.***

**\*\*Insert Figure 3 about here\*\***

Except for the CEO and CFO, this paper also focuses on another important top executive in the executive team, that is, COO. As a robustness test, this paper analyses the relationship between the joint education of executive team of CEO, CFO and COO and the performance of REITs. Figure 3 shows the education of executive team of CEO, CFO and COO and the average quarterly performance of 288 U.S. REITs in each year from 2000 to 2018.

Specifically, regardless of CEO's individual education, the bars in blue, orange and gray, called "Count Value=0", "Count Value=1" and "Count Value=2", represent the proportions of subsets of CFO and COO in which there is zero, one and two of CFO and COO with Top 20 school education, respectively.

Same with Figure 1 and Figure 2, the lines in yellow, blue and green also represent the average value of quarterly performance of REITs, measured by Tobin's Q, ROA and ROE, of all companies in each year, respectively.

As shown in this chart, the proportion of "Count Value=0", with the value range from 0.74 to 0.87, is in a state of steady and slightly decline during the whole period. In addition, both the proportions of "Count Value=1", with the value range from 0.12 to 0.23, and "Count Value=2", with the value range from 0.002 to 0.04, increase steady and slightly during the whole period.

Although the proportions of "Count Value=1" and "Count Value=2" are always lower than that of "Count Value=0", they show similar increasing trends to that of the average quarterly performance of REITs, especially after 2012. It indicates that the high education of CFO and COO play a more important role in the executive team. The inconsistent trends between the proportion of "Count Value=0" and the average performance of REITs also indicates the insignificant relationship between executive's individual education and the performance of REITs.

In summary, regardless of CEO's individual education, Figure 3 shows the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs.

As shown in Figure 3, similar to Figure 1, it can be expected that there is no significant or better relationship between executive's individual education and the performance of REITs. In addition, as considering the executive team of CEO, CFO and COO, regardless of CEO's individual education, as for the similar increasing trends between the proportion of "Count Value=1" and the average quarterly performance of REITs, and also between the proportion of "Count Value=2" and the average quarterly performance of REITs, especially after 2012, it can be expected that there is a positive relationship between the education of the executive team of CEO, CFO and COO in which at least one of CFO and COO has Top 20 school education and the performance of REITs. For a more comprehensive and accurate analysis, this paper employs the Figure 4 in the following with a stricter criterion of CEO's individual education.

**\*\*Insert Figure 4 about here\*\***

As shown in Figure 2, it can be expected that there is positive relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education and the performance of REITs, and as shown in Figure 3, it can be expected that there is positive relationship between the education of executive team of CEO, CFO and COO in which, regardless CEO's individual education, at least one of CFO and COO has Top 20 school education, and the performance of REITs. Since both Figure 2 and Figure 3 show no significantly positive impact of CEO's high individual education on the performance of REITs, for a more comprehensive and accurate analysis, similar to the analysis of the impact of the education of executive team of CEO and CFO on performance of REITs, this paper divides the executive team of CEO, CFO and COO into three categories, based on the different combinations of executive's individual education, to analyze the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. In Figure 4, it shows the education of executive team of CEO, CFO and COO and the average quarterly performance of 288 U.S. REITs in each year from 2000 to 2018, assuming that CEO in executive team has no Top 20 school education.

Same with Figure 1, Figure 2 and Figure 3, the lines in yellow, blue and green also represent the average value of quarterly performance of REITs, measured by Tobin's Q, ROA and ROE, of all companies in each year, respectively.

As shown in Figure 4, as assuming that CEO in the executive team has no Top 20 school education, the bars in blue, orange, and grey, called "Count Value=1", "Count Value=2" and "Count Value>0" represent the proportions of executive team of CEO, CFO and COO in which there is one, two, and at least one of CFO and COO with Top 20 school education, respectively.

In general, as for "Count Value=1", with the value range from 0.07 to 0.14, "Count Value=2", with the value range from 0 to 0.03, and "Count Value>0", with the value range from 0.07 to 0.15, all of these three groups show steady or increasing trends during the period, which are similar to that of the average quarterly performance of REITs.

In summary, as assuming that CEO in the executive team has no Top 20 school education,

Figure 4 shows the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. As shown in Figure 4, as for the similar increasing trends between the proportions of “Count Value=1”, “Count Value=2” and “Count Value>0” and the average quarterly performance of REITs, respectively, it can be expected that, as assuming that CEO in the executive team has no Top 20 school education, there is a positive relationship between the education of executive team of CEO, CFO and COO in which at least one of CFO and COO has Top 20 school education and the performance of REITs. Therefore, based on Figure 3 and 4, there is Hypothesis 3:

***Hypothesis 3:***

***As considering executive team of CEO, CFO and COO, there is a significantly positive relationship between the education of the executive team of CEO, CFO and COO in which CEO has no high education and at least one of CFO and COO has high education and the performance of REITs.***

In this part, this paper simply and directly analyses the relationship between executive’s education and the performance of REITs at an executive individual level and an executive team level, respectively. In the following, based on the Hypothesis 1, Hypothesis 2 and Hypothesis 3, this paper empirically examines the relationship between executive’s education and the performance of REITs at an executive individual level and an executive team level, respectively, and tries to find the best executive team of which the combination of executive’s education has greater positive impact on performance of REITs.



## **4. Data and Method**

### **4.1 Data**

#### **4.1.1 Data Resources**

For analyzing the relationship between executive's education and the performance of REITs, this paper uses two parts of U.S. REITs data. First, this paper collects the employment and education data of top executives, including CEO, CFO and COO, of all the U.S. REITs companies from the database of BoardEx of WRDS. Second, this paper also collects the quarterly financial performance data of all the U.S. REITs companies from the database of S&P Global, formerly known as SNL Financial. The period of these two parts of data is from 2000 to 2018.

To be specific, as for the data of the education of top executives of U.S. REITs, it includes the ranking of all the schools attended by the executive that is considered as the measure of executive's education. In addition, as for the data of quarterly financial performance of U.S. REITs, it includes quarterly ROA (Return on Asset), quarterly ROE (Return on Equity), and other quarterly financial performance measures, such as quarterly assets, quarterly value of common equity, quarterly value of debt, quarterly cash flow, etc.

As for the data processing, this paper combines the data of employment and education of top executives of REITs and the data of quarterly financial performance of REITs by using SNL Key Number of REITs, and then keeps all the REITs of which the data of employment and education of top executives, at least CEO, and also the data of quarterly financial performance of REITs are available for each quarter during 2000 and 2018. In the final data, there are totally 288 U.S. REITs and 19730 observations in sample.

#### **4.1.2 Variables Description**

Based on the analysis ideas and hypotheses mentioned above, this paper establishes variables as follows for the models of empirical analysis.

#### **4.1.2.1 Measures of Executive's Employment and Education**

##### *Executive's Employment*

As for the measures of top executive's employment, this paper arranges the executive's tenure into quarterly format.

##### *Executive's Education*

As for the measures of top executive's education, this paper processes the data of executive's education as follows. First, as for executive's individual education, this paper selects the school with the highest ranking among all the schools that the executive attends to, as the executive's individual education. Second, since this paper examines the impact of executive's education on performance of REITs at an executive individual level and an executive team level, after determining the executive's individual education, as follows, this paper establishes several dummies for the measures of executive's education at an executive individual level and an executive team level.

##### *(1). Measures of Executive's Individual Education*

As for the examination of the relationship between executive's individual education and the performance of REITs, this paper establishes a dummy for CEOs and CFOs who graduate from Top 20 schools, respectively. The dummy of executive's individual education, which are called "CEO Top 20" and "CFO Top 20", equal to one if the executive has Top 20 school education.

##### *(2). Measures of Education of Executive Team*

As for the examination of the relationship between the education of executive team and the performance of REITs, as follows, this paper establishes several measures for the education of the executive team of CEO and CFO, and the education of the executive team of CEO, CFO and COO, respectively.

##### *Measures of Education of Executive Team of CEO and CFO*

As for the examination of the relationship between the education of executive team of CEO and CFO and the performance of REITs, this paper establishes three dummies for three kinds of executive teams with different combinations of individual education of CEO and CFO. Specifically, first, the dummy of "Team Top 20" represents the executive team of CEO and CFO in which both CEO and CFO have Top 20 school education. Second, the dummy of "Dominant

CEO” represents the executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education. Third, the dummy of “CEO Leadership” represents the executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education.

#### *Measures of Education of Executive Team of CEO, CFO and COO*

As for the examination of the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs, this paper establishes several dummies for several kinds of executive teams with different combinations of individual education of CEO, CFO and COO, respectively, for two examinations that use different criteria of CEO’s individual education.

First, as for the general examination that examines the relationship between the education of the executive team of CEO, CFO and COO in which, regardless of CEO’s individual education, there is zero, one or two of CFO and COO with Top 20 school education and the performance of REITs, this paper establishes a dummy of “Executives Top 20” for the education of executive team of CEO, CFO and COO. “Executives Top 20” equals to zero, one and two if there is zero, one and two of CFO and COO with Top 20 school education, in other words, it represents the number of executives of CFO and COO in the executive team with Top 20 school education.

Second, as for the examination that examines the relationship between the education of the executive team of CEO, CFO and COO in which, assuming that CEO in the executive team has no Top 20 school education, there is one, two and at least one of CFO and COO with Top 20 school education and performance of REITs, this paper establishes the dummy of “Team Count” to represent the number of executives of CFO and COO in the executive team with Top 20 school education. Specifically, “Team Count\_1” equals to one if there is one executive of CFO and COO with Top 20 school education, “Team Count\_2” equals to one if both CFO and COO in executive team have Top 20 school education, “Team Count\_12” equals to one if at least one of CFO and COO in executive team has Top 20 school education.

#### **4.1.2.2 Measures of performance of REITs**

As for measuring the performance of REITs, this paper uses ROA (Return on Assets), ROE (Return on Equity) and Tobin’s Q as the measures of performance of REITs. Specifically, Tobin’s Q is defined as the market value of common equity plus total assets minus the book value of common equity, divided by company’s total assets.

### 4.1.2.3 Financial Control Variables

This paper also considers several financial control variables, including the ratio of cash to total assets, called “Cash Holdings”, the ratio of debt to total assets, called “Debt”, and the natural logarithm of total assets, using for controlling the firm size of REITs, called “Assets”, and also including ROE (Return on Equity), using for controlling the financial performance of REITs, called “Profitability”. All of the financial control variables are lagged since the level of these financial control variables in previous quarter may affect the performance of REITs in next quarter.

### 4.1.3 Statistical Description

**\*\*Insert Table 1 about here\*\***

As shown in Table 1, Panel A shows the descriptive statistics of executive’s education variables. As shown in Panel A, as for executive’s individual education, it can be seen that, there are about 23% CEOs in U.S. REITs in sample have Top 20 school education, while about 12% CFOs in U.S. REITs in sample have Top 20 school education.

As for the education of the executive team of CEO and CFO, there are about 5% executive teams in which both CEO and CFO have Top 20 school education, and about 18% executive teams in which CEO has Top 20 school education and CFO has no Top 20 school education, and about 7% executive teams in which CEO has no Top 20 school education and CFO has Top 20 school education.

In addition, as for the education of the executive team of CEO, CFO and COO, first, regardless of CEO’s individual education, there may be zero, one or two of CFO and COO in the executive team with Top 20 school education, in other words, the value of “Executives Top 20” is zero, one or two, shown as “Count Value”. Table 2 shows the proportions of each value of “Executives Top 20”.

**\*\*Insert Table 2 about here\*\***

As shown in Table 2, as for the executive team of CEO, CFO and COO, regardless of CEO’s individual education, there are about 80% executive teams in which both CFO and COO have no Top 20 school education, about 18% executive teams in which one of CFO and COO has Top 20 school education, and about 2% executive teams in which both CFO and COO have Top 20 school education.

Second, as assuming that CEO in the executive team has no Top 20 school education, it can

be seen from the variables of “Team Count\_1”, “Team Count\_2” and “Team Count\_12” shown in Table 1, there are about 11% executive teams in which one of CFO and COO has Top 20 school education, about 1% executive teams in which both CFO and COO have Top 20 school education, and about 12% executive teams in which at least one of CFO and COO has Top 20 school education.

Panel B shows the descriptive statistics of the financial performance variables of U.S. REITs. As shown in Panel B, the mean of quarterly Tobin’s Q of U.S. REITs in sample during 2000 and 2018 is 1.48, with the value range from 0.34 to 35.49. As alternative financial performance indicators, the mean of quarterly ROA (Return on Assets) of U.S. REITs in sample during 2000 and 2018 is 2.59, with the value range from -397.53 to 322.40, and the mean of quarterly ROE (Return on Equity) of U.S. REITs in sample during 2000 and 2018 is 6.44, with the value range from -905.31 to 945.77.

Panel C shows the descriptive statistics of financial control variables for controlling the firm size and financial performance of U.S. REITs. The financial control variables, including the ratio of cash to total assets, called “Cash Holdings”, the ratio of debt to total assets, called “Debt”, the natural logarithm of total assets, called “Assets”, also including ROE (Return on Equity), called “Profitability”.

As shown in Panel C, the mean value of the lagged ratio of cash to total assets (“Cash Holdings”) is 0.05, the mean value of the lagged ratio of debt to total assets (“Debt”) is 0.50, the mean value of the lagged natural logarithm of total assets (“Assets”) is 14.42, and the mean value of lagged ROE (Return on Equity, “Profitability”) is 6.43.

## **4.2 Method**

As for the analysis ideas mentioned above, there are two parts of empirical examinations of the relationship between executive’s education and the performance of REITs.

First, as for the first part of empirical examination, the examination of the relationship between executive’s individual education and the performance of REITs, based on Hypothesis 1, it is expected that there is no significant or better relationship between executive’s individual education and the performance of REITs.

Second, as for the second part of empirical examination, the examination of the relationship between the education of executive team and the performance of REITs, based on Hypothesis 2 and Hypothesis 3, it is expected that the joint education of executive team significantly affects the performance of REITs. Specifically, as considering the executive team of CEO and CFO, it is expected that there is significantly positive relationship between the education of executive team of CEO and CFO in which CEO has no high education and CFO has high education and the performance of REITs. Moreover, as considering executive team of CEO, CFO and COO, it is expected that there is a significantly positive relationship between the education of the executive

team of CEO, CFO and COO in which CEO has no Top 20 school education and at least one of CFO and COO has Top 20 school education and the performance of REITs.

#### **4.2.1 Examination of the Relationship between Executive’s Individual Education and the Performance of REITs**

As for the first part of empirical examination, this paper examines the relationship between executive’s individual education and the performance of REITs by applying an OLS (Ordinary Least Squares) model.

There are two models, Model 1 and Model 2, which examine the relationships between CEO’s individual education and the performance of REITs, and the relationship between CFO’s individual education and the performance of REITs, respectively. These two models are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorbs the fixed effects of each quarter of the whole period and the property type. Model 1 and Model 2 are shown as follows:

##### ***Model 1***

$$\text{Performance} = \alpha + b_1 * \text{CEO Top 20} + b_2 * \text{Cash Holdings} + b_3 * \text{CEO Top 20} * \text{Cash Holdings} + b_4 * \text{Assets} + b_5 * \text{Debt} + b_6 * \text{Profitability} + \varepsilon$$

##### ***Model 2***

$$\text{Performance} = \alpha + b_1 * \text{CFO Top 20} + b_2 * \text{Cash Holdings} + b_3 * \text{CFO Top 20} * \text{Cash Holdings} + b_4 * \text{Assets} + b_5 * \text{Debt} + b_6 * \text{Profitability} + \varepsilon$$

In Model 1, Performance of REITs, as the dependent variable, is measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). “CEO Top 20” is the CEO’s individual education dummy which equals to one if the CEO has Top 20 school education, otherwise, zero. “Cash Holdings”, which is calculated as the ratio of cash to total assets, is the discretionary cash for REITs. This paper introduces “Cash Holdings” into the models because the discretionary cash is expected to significantly affect the performance of REITs, and the impact of executive’s education on performance of REITs is likely to be sensitive to the available cash.

There is also an interactive term of “CEO Top 20” and “Cash Holdings”. Eichholtz and Yonder (2014) who focus on the impact of manager’s overconfidence on company performance

empirically examine the impact of cash and the impact of the interactive term of overconfidence and cash on performance of REITs, respectively, and find that REITs with overconfident CEOs tend to invest more, acquire more assets and are less likely to sell assets than their counterparts, if CEOs have enough discretionary cash. In other words, they find that the discretionary cash significantly affects the company performance by influencing manager's investment behavior. Therefore, this paper considers that "Cash Holdings", as the discretionary cash of REITs, may be one of the factors that affect the performance of REITs by influencing the business decision-making of executives with different management styles. By establishing this interactive term of "CEO Top 20" and "Cash Holdings", this paper examines the impact of CEO's individual education on performance of REITs, if CEO has enough discretionary cash, in other words, the interactive term of "CEO Top 20" and "Cash Holdings" can isolate the impact of CEO's individual education on performance of REITs, if there is enough discretionary cash.

As for the financial control variables in Model 1, it includes "Assets", which is calculated as the natural logarithm of total assets, "Debt", which is calculated as the ratio of debt to total assets, and "Profitability", which is the quarterly ROE (Return on Equity) of REITs. All the financial control variables are lagged.

In Model 2, Performance of REITs, as the dependent variable, is measured by Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity). "CFO Top 20" is the CFO's individual education dummy which equals to one if the CFO has Top 20 school education, otherwise, zero. "Cash Holdings" is also calculated as the ratio of cash to total assets. Similar to Model 1, the interactive term of "CFO Top 20" and "Cash Holdings" is used to examine the impact of CFO's individual education on performance of REITs, if there is enough discretionary cash.

The financial control variables in Model 2, including "Assets", the natural logarithm of total assets, "Debt", the ratio of debt to total assets, and "Profitability", which is the quarterly ROE (Return on Equity) of REITs. All the financial control variables are lagged.

#### **4.2.2 Examination of the Relationship between the Education of Executive Team and the Performance of REITs**

As for the second part of empirical examination, for an improvement of empirical examination of the relationship between executive's education and the company performance, this paper examines the relationship between the education of executive team and the performance of REITs by applying an OLS (Ordinary Least Squares) model. Specifically, there is a two-step examination. In the first step, this paper examines the relationship between the education of executive team of CEO and CFO and the performance of REITs. In the second step, this paper examines the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs.

#### **4.2.2.1 Examination of the Relationship between the Education of Executive Team of CEO and CFO and the Performance of REITs**

In the first step of examination, this paper examines the relationship between the education of executive team of CEO and CFO and the performance of REITs by focusing on the impact of different cooperative relationships within executive team based on the different executives' positions that are affected by different combinations of executive's individual education on performance of REITs. Specifically, as mentioned above, this paper views CEO and CFO, two of the most important executives of the company, as an executive team, and then divides the executive team of CEO and CFO into three categories, based on the different combinations of executive's individual education. First, the executive team of CEO and CFO, which is called "CEO Leadership", represents the executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education. As the executive team of "CEO Leadership" comprehensively displays the leadership skill for a CEO, as a CEO with lower education leads executives with high education, this paper examines whether the education of executive team of CEO and CFO that fully displays the CEO's leadership skill has significant impact on performance of REITs. Second, the executive team of CEO and CFO, which is called "Team Top 20", represents the executive team of CEO and CFO in which both CEO and CFO have Top 20 school education. As the executive team of "Team Top 20" effectively shows the high-educated cooperation among executives in the executive team, as a CEO with high education leads executives with similar high education, this paper examines whether the education of executive team of CEO and CFO that effectively shows the high-educated cooperation among the executives with similar high education has significant impact on performance of REITs. Third, the executive team of CEO and CFO, which is called "Dominant CEO", represents the executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education. As the executive team of "Dominant CEO" directly shows the CEO's dominant role in the executive team, as a CEO with high education leads executives with lower education, this paper examines whether the education of executive team that shows the dominant role of CEO with high education as leading executives with lower education has significant impact on performance of REITs.

Based on the idea above, there are three models, Model 3, Model 4 and Model 5. Specifically, Model 3 examines the relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education and the performance of REITs. Model 4 examines the relationship between the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education and the performance of REITs. Model 5 examines the relationship between the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education and the performance of REITs. These three models are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorbs the fixed



effects of each quarter of the whole period and the property type. Model 3, Model 4 and Model 5 are shown as follows:

### ***Model 3***

$$\text{Performance} = \alpha + b_1 * \text{CEO Leadership} + b_2 * \text{Cash Holdings} + b_3 * \text{CEO Leadership} \\ * \text{Cash Holdings} + b_4 * \text{Assets} + b_5 * \text{Debt} + b_6 * \text{Profitability} + \varepsilon$$

### ***Model 4***

$$\text{Performance} = \alpha + b_1 * \text{Team Top 20} + b_2 * \text{Cash Holdings} + b_3 * \text{Team Top 20} * \text{Cash Holdings} \\ + b_4 * \text{Assets} + b_5 * \text{Debt} + b_6 * \text{Profitability} + \varepsilon$$

### ***Model 5***

$$\text{Performance} = \alpha + b_1 * \text{Dominant CEO} + b_2 * \text{Cash Holdings} + b_3 * \text{Dominant CEO} \\ * \text{Cash Holdings} + b_4 * \text{Assets} + b_5 * \text{Debt} + b_6 * \text{Profitability} + \varepsilon$$

In Model 3, Performance of REITs, as the dependent variable, is measured by Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity). "CEO Leadership" is the executive team education dummy which equals to one if CEO in executive team has no Top 20 school education and CFO in executive team has Top 20 school education, otherwise, zero. "Cash Holdings" in Model 3 is also calculated as the ratio of cash to total assets. Similar to Model 1 and Model 2, the interactive term of "CEO Leadership" and "Cash Holdings" is used to examine the impact of the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education on performance of REITs, if there is enough discretionary cash.

The financial control variables in Model 3, including "Assets", the natural logarithm of total assets, "Debt", the ratio of debt to total assets, and "Profitability" which is the quarterly ROE (Return on Equity) of REITs. All the financial control variables are lagged.

In Model 4, Performance of REITs, as the dependent variable, is measured by Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity). "Team Top 20" is the executive team education dummy which equals to one if both CEO and CFO in executive team have Top 20 school education, otherwise, zero. "Cash Holdings" in Model 4 is also calculated as the ratio of cash to total assets. Similar to Model 3, the interactive term of "Team Top 20" and "Cash

Holdings” is used to examine the impact of the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education on performance of REITs, if there is enough discretionary cash.

The financial control variables in Model 4, including “Assets”, the natural logarithm of total assets, “Debt”, the ratio of debt to total assets, and “Profitability” which is the quarterly ROE (Return on Equity) of REITs. All the financial control variables are lagged.

In Model 5, Performance of REITs, as the dependent variable, is measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). “Dominant CEO” is the executive team education dummy which equals to one if CEO in executive team has Top 20 school education and CFO in executive team has no Top 20 school education, otherwise, zero. “Cash Holdings” in Model 5 is also calculated as the ratio of cash to total assets. Similar to Model 3 and Model 4, the interactive term of “Dominant CEO” and “Cash Holdings” is used to examine the impact of the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education on performance of REITs, if there is enough discretionary cash.

The financial control variables in Model 5, including “Assets”, the natural logarithm of total assets, “Debt”, the ratio of debt to total assets, and “Profitability” which is the quarterly ROE (Return on Equity) of REITs. All the financial control variables are lagged.

#### **4.2.2.2 Examination of the Relationship between the Education of Executive Team of CEO, CFO and COO and the Performance of REITs**

In the second step of examination, for a robustness examination, this paper examines the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. Specifically, as mentioned above, there are two examinations in the second step. First, for a more general examination, this paper examines the relationship between the education of executive team of CEO, CFO and COO in which, regardless of the CEO’s individual education, there may be zero, one or two of CFO and COO with Top 20 school education and the performance of REITs. Second, for a more comprehensive and accurate examination, similar to the examination of the impact of the education of executive team of CEO and CFO on performance of REITs, this paper also divides the executive team of CEO, CFO and COO into three categories, based on the different combinations of executive’s individual education, to examine the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. To be specific, by assuming that CEO in the executive team has no Top 20 school education, this paper examines the relationship between the education of executive team of CEO, CFO and COO in which there is one, two or at least one of CFO and COO with Top 20 school education and the performance of REITs.

Based on the idea above, there are three models, Model 6, Model 7 and Model 8.

Specifically, Model 6, as a more general examination, examines the relationship between the education of executive team of CEO, CFO and COO in which, regardless of the CEO's individual education, there is zero, one or two of CFO and COO with Top 20 school education and the performance of REITs. For a more comprehensive and accurate examination, as assuming that CEO in the executive team has no Top 20 school education, Model 7 examines the relationship between the education of executive team of CEO, CFO and COO in which there is one or two of CFO and COO with Top 20 school education and the performance of REITs, and Model 8 examines the relationship between the education of executive team of CEO, CFO and COO in which there is at least one of CFO and COO with Top 20 school education and the performance of REITs. These three models are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorbs the fixed effects of each quarter of the whole period and the property type. Model 6, Model 7 and Model 8 are shown as follows:

***Model 6***

$$\text{Performance} = a + b_1 * \text{CEO Top 20} + b_2 * \text{Executives Top 20} + b_3 * \text{Cash Holdings} + b_4 * \text{Assets} + b_5 * \text{Debt} + b_6 * \text{Profitability} + \varepsilon$$

***Model 7***

$$\text{Performance} = a + b_1 * \text{Team Count}_1 + b_2 * \text{Team Count}_2 + b_3 * \text{Cash Holdings} + b_4 * \text{Assets} + b_5 * \text{Debt} + b_6 * \text{Profitability} + \varepsilon$$

***Model 8***

$$\text{Performance} = a + b_1 * \text{Team Count}_{12} + b_2 * \text{Cash Holdings} + b_3 * \text{Assets} + b_4 * \text{Debt} + b_5 * \text{Profitability} + \varepsilon$$

In Model 6, Performance of REITs, as the dependent variable, is measured by Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity). Regardless of the CEO's individual education, "Executives Top 20" is the variable of the education of executive team of CEO, CFO and COO which equals to zero if both CFO and COO in executive team have no Top 20 school education, or equals to one if there is one of CFO and COO in executive team with Top 20 school education, or equals to two if both CFO and COO in executive team have Top 20 school education. "CEO Top 20" is the CEO's individual education dummy which equals to one if the

CEO has Top 20 school education, otherwise, zero. It is more comprehensive to introduce “CEO Top 20” since “Executives Top 20” does not focus on CEO’s individual education in executive team. “Cash Holdings” in Model 6 is also calculated as the ratio of cash to total assets.

The financial control variables in Model 6, including “Assets”, the natural logarithm of total assets, “Debt”, the ratio of debt to total assets, and “Profitability” which is the quarterly ROE (Return on Equity) of REITs. All the financial controls are lagged.

In Model 7, Performance of REITs, as the dependent variable, is measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). As for the dummy variables of the education of the executive team of CEO, CFO and COO, as assuming that CEO in the executive team has no Top 20 school education, “Team Count\_1” is the executive team education dummy which equals to one if there is one of CFO or COO in executive team with Top 20 school education, otherwise, zero. “Team Count\_2” is the executive team education dummy which equals to one if both CFO or COO in executive team have Top 20 school education, otherwise, zero. “Cash Holdings” in Model 7 is also calculated as the ratio of cash to total assets.

The financial control variables in Model 7, including “Assets”, the natural logarithm of total assets, “Debt”, the ratio of debt to total assets, and “Profitability” which is the quarterly ROE (Return on Equity) of REITs. All the financial controls are lagged.

In Model 8, Performance of REITs, as the dependent variable, is measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). As for the dummy variables of the education of the executive team of CEO, CFO and COO, as assuming that CEO in the executive team has no Top 20 school education, “Team Count\_12” is the executive team education dummy which equals to one if there is at least one of CFO and COO in executive team with Top 20 school education, otherwise, zero. “Cash Holdings” in Model 8 is also calculated as the ratio of cash to total assets.

The financial control variables in Model 8, including “Assets”, the natural logarithm of total assets, “Debt”, the ratio of debt to total assets, and “Profitability” which is the quarterly ROE (Return on Equity) of REITs. All the financial controls are lagged.

## 5. Results of Empirical Examinations

### 5.1 Results of the Examination of the Relationship between Executive's Individual Education and the Performance of REITs

Table 3 and Table 4 show the results of Model 1 and Model 2 that examine the relationship between executive's individual education and the performance of REITs.

**\*\*Insert Table 3 about here\*\***

Regression (1) to Regression (6) in Table 3 show the results of the examination of the relationship between CEO's individual education and the performance of REITs.

As shown in Table 3, as for all regressions, there is no significant coefficient of "CEO Top 20" for all the three measures of the financial performance of REITs, that are, Tobin's Q, ROA (Return on Assets), and ROE (Return on Equity). It suggests that there is no significant relationship between CEO's individual education and the financial performance of REITs.

In regression (1) and regression (2), as for "Cash Holdings", it shows that there is a significantly positive relationship between the lagged cash-to-assets ratio and the financial performance of REITs, as measured by Tobin's Q, specifically, a 1% increase in cash-to-assets ratio leads to a 1.38%-2.37% increase in the financial performance of REITs, as measured by Tobin's Q.

As for regression (2), regression (4) and regression (6), as considering the interactive term of "CEO Top 20" and "Cash Holdings" in Model 1, it shows that there is a significantly negative relationship between the interactive term of "CEO Top 20" and "Cash Holdings" and the financial performance of REITs, as measuring the financial performance of REITs by Tobin's Q and ROE (Return on Equity). It suggests that, if there is enough discretionary cash, there is a significantly negative impact of CEO's individual Top 20 school education on financial performance of REITs.

As for the control variables for the financial performance of REITs, there is a significantly positive impact of "Assets" on financial performance of REITs, measured by ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 1.35%-1.39% increase in ROE (Return on Equity). There is a significantly negative relationship between "Debt" and the financial performance of REITs, measured by Tobin's Q and ROA (Return on Assets), a 1% increase in lagged debt-to-assets ratio leads to a 0.289% to 0.295% decrease in Tobin's Q, and a

6.769% to 6.832% decrease in ROA (Return on Assets). As a proxy of profitability, it shows that there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.002% increase in Tobin's Q, a 0.025% increase in ROA and a 0.3% increase in ROE.

In summary, Table 3 presents the results of OLS regressions of Model 1 that examines the relationship between CEO's individual education and the performance of REITs. In the result, it shows that, first, there is no significant relationship between CEO's individual education and the performance of REITs. Second, if there is enough discretionary cash, there is a significantly negative impact of CEO's individual Top 20 school education on financial performance of REITs.

**\*\*Insert Table 4 about here\*\***

Regression (1) to Regression (6) in Table 4 show the results of the examination of the relationship between CFO's individual education and the performance of REITs.

As shown in Table 4, as for regressions (2), regression (5) and regression (6), there are significant coefficients of "CFO Top 20" for the financial performance of REITs, as measured by Tobin's Q and ROE (Return on Equity).

However, as for regression (2), regression (4) and regression (6), as considering the interactive term of "CFO Top 20" and "Cash Holdings" in Model 2, it shows that there is a significant negative relationship between the interactive term of "CFO Top 20" and "Cash Holdings" and the financial performance of REITs, as measuring the financial performance of REITs by Tobin's Q and ROE (Return on Equity). It suggests that although CFO's individual education shows significantly positive impact on financial performance of REITs, as measured by Tobin's Q and ROE (Return on Equity), if there is enough discretionary cash, there is a significantly negative impact of CFO's individual Top 20 school education on financial performance of REITs.

In regression (1) and regression (2), as for "Cash Holdings", it shows that there is a significantly positive relationship between the lagged cash-to-assets ratio and the financial performance of REITs, as measured by Tobin's Q, specifically, a 1% increase in cash-to-assets ratio leads to a 1.37%-1.77% increase in the financial performance of REITs, as measured by Tobin's Q.

As for the control variables for the financial performance of REITs, there is a significantly positive impact of "Assets" on financial performance of REITs, as measured by ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 1.25%-1.29% increase in ROE (Return on Equity). There is a significantly negative relationship between "Debt" and the financial performance of REITs, as measured by Tobin's Q and ROA (Return on Assets), a 1% increase in lagged debt-to-assets ratio leads to a 0.280% to 0.291% decrease in Tobin's Q, and a 6.796% to 6.839% decrease in ROA (Return on Assets). As a proxy of profitability, it shows that

there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.002% increase in Tobin's Q, a 0.025% increase in ROA and a 0.3% increase in ROE.

In summary, Table 4 presents the results of OLS regressions of Model 2 that examines the relationship between CFO's individual education and the performance of REITs. In the result, it shows that, although there is slightly significantly positive relationship between CFO's individual education and the financial performance of REITs, as measured by Tobin's Q and ROE, however, if there is enough discretionary cash, there is a significantly negative impact of CFO's individual Top 20 school education on financial performance of REITs.

As for Table 3 and Table 4, Model 1 and Model 2 examine the relationship between executive's individual education and the performance of REITs, as for the results of Model 1 and Model 2 that are consistent with Hypothesis 1, there is no significant or better relationship between executive's individual education and the performance of REITs, and if there is enough discretionary cash, executive's high individual education significantly negatively affects the performance of REITs.

## **5.2 Results of the Examination of the Relationship between the Education of Executive Team and the Performance of REITs**

In the second part of empirical examination that examines the relationship between the education of executive team and the performance of REITs, there is a two-step examination. In the first step, this paper examines the relationship between the education of executive team of CEO and CFO and the performance of REITs. In the second step, it examines the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs.

### **5.2.1 Results of the Examination of the Relationship between the Education of Executive Team of CEO and CFO and the Performance of REITs**

Table 5, Table 6 and Table 7 show the results of Model 3, Model 4, and Model 5 that examine the relationship between the education of executive team of CEO and CFO and the performance of REITs.

**\*\*Insert Table 5 about here\*\***

Regression (1) to Regression (6) in Table 5 show the results of the examination of the relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education and the performance of REITs.

As shown in Table 5, as for all the regressions of Model 3, there are significant coefficients of “CEO Leadership” for the financial performance of REITs, as measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). It implies that there is a significantly positive impact of the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education on financial performance of REITs.

As for regression (2), regression (4) and regression (6), as considering the interactive term between “CEO Leadership” and “Cash Holdings” in Model 3, it shows that there is no significant relationship between the interactive term of “CEO Leadership” and “Cash Holdings” and the financial performance of REITs.

In regression (1) and regression (2), as for “Cash Holdings”, it shows that there is a significantly positive relationship between lagged cash-to-assets ratio and the financial performance of REITs, as measured by Tobin’s Q, a 1% increase in cash-to-assets ratio leads to a 1.8%-1.96% increase in the financial performance of REITs, measured by Tobin’s Q.

As for the control variables for the financial performance of REITs, there is a significantly positive impact of “Assets” on financial performance of REITs, as measured by all three financial performance indicators, Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 0.06% increase in Tobin’s Q, a 0.5% increase in ROA (Return on Assets), and a 2.3% increase in ROE (Return on Equity). There is a significantly negative relationship between “Debt” and the financial performance of REITs, as measured by ROA (Return on Assets), a 1% increase in lagged debt-to-assets ratio leads to a 4.25% to 4.27% decrease in ROA (Return on Assets). As a proxy of profitability, it shows that there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.002% increase in Tobin’s Q, a 0.02% increase in ROA and a 0.37% increase in ROE.

In summary, Table 5 presents the results of OLS regressions of Model 3 that examines the relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education and the performance of REITs. In the result, it shows that, there is significantly positive relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education and the financial performance of REITs, as measured by Tobin’s Q, ROA and ROE, and there is no significant impact of the interactive term of “CEO Leadership” and “Cash Holdings” on financial performance of REITs. It indicates that the education of executive team of “CEO Leadership” that fully displays the leadership skill for the CEO with lower education as leading executives with high education has significantly positive impact on



performance of REITs.

**\*\*Insert Table 6 about here\*\***

Regression (1) to Regression (6) in Table 6 show the results of the examination of the relationship between the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education and the performance of REITs.

As shown in Table 6, as for all the regressions of Model 4, there is no significant coefficient of “Team Top 20” for the financial performance of REITs, as measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). It implies that there is no significantly impact of the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education on financial performance of REITs.

However, as for regression (2), regression (4) and regression (6), as considering the interactive term of “Team Top 20” and “Cash Holdings” in Model 4, it shows that there is a significantly negative relationship between the interactive term of “Team Top 20” and “Cash Holdings” and the financial performance of REITs, as measured by Tobin’s Q, suggests that there is a significantly negative impact of the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education on financial performance of REITs, if there is enough discretionary cash.

In regression (1) and regression (2), as for “Cash Holdings”, it shows that there is a significantly positive relationship between lagged cash-to-assets ratio and the financial performance of REITs, as measured by Tobin’s Q, a 1% increase in cash-to-assets ratio leads to a 1.8%-2.1% increase in the financial performance of REITs, measured by Tobin’s Q.

As for the control variables for the financial performance of REITs, there is a significantly positive impact of “Assets” on financial performance of REITs, as measured by all three financial performance indicators, Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 0.067%-0.068% increase in Tobin’ Q, a 0.537%-0.541% increase in ROA (Return on Assets), and a 2.353%-2.368% increase in ROE (Return on Equity). There is a significantly negative relationship between “Debt” and the financial performance of REITs, as measured by ROA (Return on Assets), a 1% increase in lagged debt-to-assets ratio leads to a 4.213% to 4.238% decrease in ROA (Return on Assets). As a proxy of profitability, it shows that there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.002% increase in Tobin’s Q, a 0.023% increase in ROA and a 0.37% increase in ROE.

In summary, Table 6 presents the results of OLS regressions of Model 4 that examines the relationship between the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education and the performance of REITs. In the result, it shows that, there is no significant relationship between the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education and the financial performance of

REITs, as measured by Tobin's Q, ROA and ROE, and if there is enough discretionary cash, there is a significantly negative impact of the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education on financial performance of REITs. It indicates that the education of executive team of "Team Top 20" that effectively shows the high-educated cooperation among the executives with similar high education has no significant impact on performance of REITs, however, the high-educated cooperation among the executives with high education significantly negatively affects the performance of REITs, if there is enough discretionary cash.

**\*\*Insert Table 7 about here\*\***

Regression (1) to Regression (6) in Table 7 show the results of the examination of the relationship between the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education and the performance of REITs.

As shown in Table 7, as for all the regressions of Model 5, there is only slightly significant coefficient of "Dominant CEO" for the financial performance of REITs, as measured by Tobin's Q, as shown in regression (2), however, in general, there is no significant and consistent coefficient of "Dominant CEO" for the financial performance of REITs. It implies that there is no significant impact of the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education on the financial performance of REITs.

However, as for regression (2), regression (4) and regression (6), as considering the interactive term of "Dominant CEO" and "Cash Holdings" in Model 5, it shows that there is a significantly negative relationship between the interactive term of "Dominant CEO" and "Cash Holdings" and the financial performance of REITs, as measured by all three financial performance indicators, Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity), suggests that there is a significantly negative impact of the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education on the financial performance of REITs, if there is enough discretionary cash.

In regression (1) and regression (2), as for "Cash Holdings", it shows that there is a significantly positive relationship between lagged cash-to-assets ratio and the financial performance of REITs, as measured by Tobin's Q, a 1% increase in cash-to-assets ratio leads to a 1.78%-2.31% increase in the financial performance of REITs, as measured by Tobin's Q.

As for the control variables for the financial performance of REITs, there is a significantly positive impact of "Assets" on financial performance of REITs, as measured by all three financial performance indicators, Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 0.065%-0.068% increase in Tobin's Q, a 0.513%-0.529% increase in ROA (Return on Assets), and a 2.339%-2.379% increase in ROE (Return on Equity). There is a significantly negative relationship between "Debt" and the financial performance of REITs, as measured by ROA (Return on Assets), a 1% increase in lagged debt-to-assets ratio leads to a 4.249% to 4.355% decrease in ROA (Return on Assets).

As a proxy of profitability, it shows that there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.002% increase in Tobin's Q, a 0.023% increase in ROA and a 0.37% increase in ROE.

In summary, Table 7 presents the results of OLS regressions of Model 5 that examines the relationship between the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education and the performance of REITs. In the result, it shows that, there is no significant impact of the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education on financial performance of REITs, and if there is enough discretionary cash, there is a significantly negative impact of the education of executive team in which CEO has Top 20 school education and CFO has no Top 20 school education on the financial performance of REITs. It indicates that the education of executive team of "Dominant CEO" that shows the dominant role of CEO with high education as leading executives with lower education has no significant impact on performance of REITs, however, the dominant role of CEO with high education as leading executives with lower education significantly negatively affects the performance of REITs, if there is enough discretionary cash.

As for Table 5, Table 6 and Table 7, Model 3, Model 4 and Model 5 examine the relationship between the education of executive team of CEO and CFO and the performance of REITs, as for the results of Model 3, Model 4 and Model 5 that are consistent with Hypothesis 2, as considering the executive team of CEO and CFO, there is significantly positive relationship between the education of executive team of CEO and CFO in which CEO has no high education and CFO has high education and the performance of REITs, indicates that the education of executive team of "CEO Leadership" that fully displays the leadership skill for the CEO with lower education as leading executives with high education has significantly positive impact on performance of REITs.

### **5.2.2 Summary of the Results of Model 1 to Model 5**

As for the results of regressions of Model 1 and Model 2 shown in Table 3 and Table 4, for the examination of the relationship between executive's individual education and the performance of REITs, it can be seen that there is no significant or better relationship between executive's individual education and the performance of REITs, however, if there is enough discretionary cash, executive's high individual education significantly negatively affects the performance of REITs.

In addition, as for the results of regressions of Model 3, Model 4 and Model 5 shown in

Table 5, Table 6 and Table 7, for the examination of the relationship between the education of executive team of CEO and CFO and the performance of REITs, it suggests that there is significantly positive relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education (“CEO Leadership”) and the performance of REITs, indicates that the education of executive team of “CEO Leadership” that fully displays the leadership skill for the CEO with lower education as leading executives with high education has significantly positive impact on performance of REITs.

Moreover, as for the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education (“Team Top 20”), and CEO has Top 20 school education and CFO has no Top 20 school education (“Dominant CEO”), there is no significant relationships between the education of “Team Top 20” and the performance of REITs, and also between the education of “Dominant CEO” and the performance of REITs, however, if there is enough discretionary cash, the education of “Team Top 20” and “Dominant CEO” significantly negatively affect the performance of REITs. It indicates that the education of executive team of “Team Top 20” that effectively shows the high-educated cooperation among the executives with similar high education and the education of executive team of “Dominant CEO” that shows the dominant role of CEO with high education as leading executives with lower education have no significant impact on performance of REITs, however, the high-educated cooperation among the executives with high education and the dominant role of CEO with high education as leading executives with lower education significantly negatively affect the performance of REITs, if there is enough discretionary cash.

As for the above results of the examinations of the relationships between executive’s individual education and the performance of REITs, and the relationship between the education of executive team of CEO and CFO and the performance of REITs, there are some related views of point from some studies that can provide explanations and support.

Mishra and Metilda (2015) find that the overconfidence increases with the level of education. In addition, Eichholtz and Yonder (2014) who focus on the relationship between the CEO’s overconfidence and investment performance of REITs find that REITs with overconfident CEOs tend to invest more, acquire more assets and are less likely to sell assets if they have enough discretionary cash. Moreover, REITs with overconfident managers show lower property investment performance, which is measured by net operating income and gain on sale of real estate.

Therefore, it can be expected that executives who have high education tend to be overconfident. They would be more aggressive on business strategies, overestimate investment income and underestimate investment risk, and then their more aggressive business decisions from the characteristic of overconfidence would negatively affect the company performance.

Back to this paper, as for the results of Model 1 and Model 2 that there is significantly negative relationship between the interactive terms of executive’s individual education (“CEO Top 20” and “CFO Top 20”) and “Cash Holdings” and the performance of REITs, it can be expected that as two of the most important top executives who have significantly dominant

power in business decision-making, CEO and CFO with high individual education tend to be overconfident and if there is enough discretionary cash, their more aggressive business decisions may negatively affect the performance of REITs.

Moreover, as for the results of Model 3 that there is positive relationship between “CEO Leadership” and the performance of REITs, the executive team of “CEO Leadership” in which CEO has no Top 20 school education and CFO has Top 20 school education fully displays the leadership skill for the CEO with lower education as leading executives with high education and can be considered as “good cooperation team”. It can be expected that CEO without high individual education tends to be more approachable and better at listening to others opinions, it is more frequently for them to adopt the high-quality ideas that have positive impact on company performance from CFO with high individual education, as another important executive in top executive team. Meanwhile, comparing with the CEO who are with high individual education and overconfident, CEO without high individual education will be more cautious in assessing the investment income and investment risk of the projects to ensure that the investment positively affects the company performance. Therefore, the cooperation of the executive team in which CEO has no Top 20 school education and CFO has Top 20 school education is expected to positively affect the performance of REITs.

In addition, as for the results of Model 4 and Model 5 that there are negative relationships between the interactive term of “Team Top 20” and “Cash Holdings” and the performance of REITs, and also between the interactive term of “Dominant CEO” and “Cash Holdings” and the performance of REITs. The executive team of “Team Top 20” and “Dominant CEO” in which both CEO and CFO have Top 20 school education, and CEO has Top 20 school education and CFO has no Top 20 school education, respectively, effectively show the high-educated cooperation among the executives with similar high education and the dominant role of CEO with high education as leading executives with lower education, respectively, and can be considered as “overconfident team” and “overconfident director team”, respectively. Therefore, it can be expected that if there is enough discretionary cash, these teams would be overconfident to the projects that they invest in, overestimate the investment income and underestimate the investment risk of the projects, and the more aggressive business decisions of the executive teams of “Team Top 20” and “Dominant CEO” may negatively affect the performance of REITs.

### **5.2.3 Results of the Examination of the Relationship between the Education of Executive Team of CEO, CFO and COO and the Performance of REITs**

Table 8 and Table 9 show the results of Model 6, Model 7 and Model 8 that examine the relationship between the education of executive team of CEO, CFO and COO and the financial performance of REITs.

**\*\*Insert Table 8 about here\*\***

Regression (1) to Regression (6) in Table 8 show the results of the examination of the relationship between the education of executive team of CEO, CFO and COO in which, regardless of CEO's individual education, there may be zero, one and two of CFO and COO with Top 20 school education and the performance of REITs. Because the “Executives Top 20” dummy does not focus on CEO’s individual education, Model 6 is more comprehensive to introduce the “CEO Top 20” dummy.

As shown in Table 8, as for all the regressions of Model 6, it can be seen that there is no significant coefficient of “CEO Top 20” for the financial performance of REITs, as measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity), suggests that there is no significant impact of CEO’s individual education on financial performance of REITs.

In addition, there is no significant coefficient of “Executives Top 20” for the financial performance of REITs, as measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity).

As for the results above, it suggests that there is no significant relationship between executive’s individual education and the performance of REITs. However, as for the executive team of CEO, CFO and COO, because “Executives Top 20” does not focus on the CEO’s individual education, it includes various of executive teams of CEO, CFO and COO with different combinations of individual education of CEO, CFO and COO. Therefore, there is no definitely result of the relationship between the education of executive team of CEO, CFO and COO and the financial performance of REITs, as shown in the result of “Executives Top 20” of Model 6 in Table 8.

As for “Cash Holdings”, it shows that there is no significant relationship between lagged cash-to-assets ratio and the financial performance of REITs, as measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity).

As for the control variables for the financial performance of REITs, there is a significantly positive impact of “Assets” on financial performance of REITs, measured by all three financial performance indicators, Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 0.075%-0.077% increase in Tobin’ Q, a 0.744%-0.756% increase in ROA (Return on Assets), and a 1.558%-1.63% increase in ROE (Return on Equity). There is no significant relationship between “Debt” and the financial performance of REITs. As a proxy of profitability, it shows that there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.003% increase in Tobin’s Q, a 0.020% increase in ROA and a 0.225% increase in ROE.

In summary, Table 8 presents the results of OLS regressions of Model 6 that examines the relationship between the education of executive team of CEO, CFO and COO in which, regardless of CEO’s individual education, there may be zero, one and two of CFO and COO with

Top 20 school education and the performance of REITs. In the result, it shows that, there is no significant relationship between executive's individual education and the performance of REITs, as measured by Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity). In addition, it shows no definitely and explicitly relationship between the education of executive team of CEO, CFO and COO on the performance of REITs. Therefore, this paper uses a stricter criterion of CEO's individual education in Model 7 and Model 8 for a more accurate and comprehensive result of the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs.

**\*\*Insert Table 9 about here\*\***

For a more accurate and comprehensive result, and because as shown in the Model 3 that there is significantly positive relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education and the performance of REITs, similar to the examination of the impact of the education of executive team of CEO and CFO on performance of REITs, in Model 7 and Model 8, this paper divides the executive team of CEO, CFO and COO into three categories, based on the different combinations of executive's individual education, and examines the relationship between the education of executive team of CEO, CFO and COO in which there is one or two of CFO and COO with Top 20 school education and the performance of REITs in Model 7, and the relationship between the education of executive team of CEO, CFO and COO in which there is at least one of CFO and COO with Top 20 school education and the performance of REITs in Model 8, as assuming that CEO in the executive team has no Top 20 school education.

Regression (1) to Regression (6) in Table 9 show the results of the examination of the relationship between the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and there is one, two or at least one of CFO and COO with Top 20 school education and the performance of REITs.

As shown in Table 9, as for the regression (1) to regression (3) of Model 7, first, "Team Count\_1" represents the executive team in which CEO has no Top 20 school education and one of CFO and COO has Top 20 school education. It shows that there is significantly positive impact of the education of executive team of "Team Count\_1" on financial performance of REITs, as measured by all the three financial performance indicators, Tobin's Q, ROA (Return on Assets) and ROE (Return on Equity). Second, "Team Count\_2" represents the executive team in which CEO has no Top 20 school education and both of CFO and COO have Top 20 school education. It shows that there is slightly significantly positive impact of the education of executive team of "Team Count\_2" on financial performance of REITs, as measured by Tobin's Q.

As for the regression (4) to regression (6) of Model 8, as a robustness test of "Team Count\_1" and "Team Count\_2", "Team Count\_12" represents the executive team in which CEO has no Top 20 school education and at least one of CFO and COO has Top 20 school education. It shows that there is significantly positive impact of the education of executive team of "Team

Count\_12” on financial performance of REITs, as measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity).

As for “Cash Holdings”, it shows that there is no significant relationship between lagged cash-to-assets ratio and the financial performance of REITs, as measured by Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity).

As for the control variables for the financial performance of REITs in Model 7, there is a significantly positive impact of “Assets” on financial performance of REITs, measured by all three financial performance indicators, Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 0.077% increase in Tobin’s Q, a 0.751% increase in ROA (Return on Assets), and a 1.615% increase in ROE (Return on Equity). There is no significant relationship between “Debt” and the financial performance of REITs, as measured by all three financial performance indicators, Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). As a proxy of profitability, it shows that there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.003% increase in Tobin’s Q, a 0.019% increase in ROA and a 0.223% increase in ROE.

As for the control variables for the financial performance of REITs in Model 8, there is a significantly positive impact of “Assets” on financial performance of REITs, measured by all three financial performance indicators, Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity), a 1% increase in lagged natural logarithm of assets leads to a 0.078% increase in Tobin’s Q, a 0.750% increase in ROA (Return on Assets), and a 1.602% increase in ROE (Return on Equity). There is no significant relationship between “Debt” and the financial performance of REITs, as measured by all three financial performance indicators, Tobin’s Q, ROA (Return on Assets) and ROE (Return on Equity). As a proxy of profitability, it shows that there is a significantly positive relationship between lagged ROE (Return on Equity) and the financial performance of REITs, suggests that the ROE in previous quarter, that is, the profitability of previous quarter, has significantly positive impact on financial performance of REITs in next quarter, specifically, a 1% increase in the lagged ROE leads to a 0.003% increase in Tobin’s Q, a 0.019% increase in ROA and a 0.223% increase in ROE.

In summary, Table 9 presents the results of OLS regressions of Model 7 and Model 8 that examine the relationship between the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and there is one or two of CFO and COO with Top 20 school education and the performance of REITs, and the relationship between the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and there is at least one of CFO and COO with Top 20 school education and the performance of REITs, respectively. In the result, it shows that, there is significantly positive impact of the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and one of CFO and COO has Top 20 school education on financial performance of REITs. In addition, there is also a slightly significantly positive impact of the education of



executive team of CEO, CFO and COO in which CEO has no Top 20 school education and both CFO and COO have Top 20 school education on financial performance of REITs. As a robustness test, it shows that there is significantly positive impact of the executive team of CEO, CFO and COO in which CEO has no Top 20 school education and at least one of CFO and COO has Top 20 school education on financial performance of REITs.

It indicates that, similar to the executive team of “CEO Leadership”, the executive team of CEO, CFO and COO in which CEO has no Top 20 school education and one, two or at least one of CFO and COO has Top 20 school education can be also considered as “good cooperation team”, and the education of the executive team shows significantly positive impact on performance of REITs.

Therefore, it shows a more explicit and accurate result on the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. As for Table 9, Model 7 and Model 8 examine the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs, as for the results of Model 7 and Model 8 that are consistent with Hypothesis 3, as considering executive team of CEO, CFO and COO, there is a significantly positive relationship between the education of the executive team of CEO, CFO and COO in which CEO has no Top 20 school education and at least one of CFO and COO has Top 20 school education and the performance of REITs.

In addition, comparing with the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and both CFO and COO have Top 20 school education, there is a greater significantly positive relationship between the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and one of CFO and COO has Top 20 school education and the performance of REITs. Therefore, the best executive team that has a greater positive impact on performance of REITs is the one in which CEO has no high education, and one of CFO and COO has high education.

## 6. Conclusion and Discussion

This paper focuses on the relationship between executive's education and the performance of U.S. REITs, by using the data of executive's education and the financial performance of 288 U.S. REITs from 2000 to 2018. As for empirical analysis, this paper employs two parts of empirical examinations to examine the relationship between executive's education and the performance of REITs at an executive individual level and an executive team level.

In the first part of empirical examination, this paper examines the relationship between executive's individual education and the performance of REITs. In particular, this paper examines the impact of CEO's individual education and CFO's individual education on performance of REITs, respectively. In the result, consistent with Hypothesis 1, this paper finds that there is no significant or better relationship between executive's individual education and the performance of REITs, as considering CEO's and CFO's individual education. However, as considering the interactive impact of executive's individual education and discretionary cash, there is significantly negative relationship between the interactive term of executive's individual education and discretionary cash and the performance of REITs, it implies that executive's high individual education negatively affects the performance of REITs, if there is enough discretionary cash.

In the second part of examination, this paper examines the relationship between the education of executive team and the performance of REITs by focusing on the impact of the cooperation of executives with different individual education in the executive team on performance of REITs and employing a two-step examination.

In the first step, this paper examines the relationship between the education of executive team of CEO and CFO and the performance of REITs. In the result, consistent with Hypothesis 2, this paper finds that there is significantly positive relationship between the education of executive team of CEO and CFO in which CEO has no Top 20 school education and CFO has Top 20 school education ("CEO Leadership") and the performance of REITs. As for other executive teams of CEO and CFO with different combinations of individual education of CEO and CFO, there is no significant relationships between the education of executive team of CEO and CFO in which CEO has Top 20 school education and CFO has no Top 20 school education ("Dominant CEO") and the performance of REITs, and also between the education of executive team of CEO and CFO in which both CEO and CFO have Top 20 school education ("Team Top 20") and the performance of REITs, respectively. However, as considering the interactive impact of the education of executive team of CEO and CFO and discretionary cash, there is significantly negative impact of the education of executive team of "Dominant CEO" and "Team Top 20" on performance of REITs, respectively, it implies that the education of executive team of "Dominant CEO" and "Team Top 20" negatively affect the performance of REITs, if there is

enough discretionary cash.

In summary, based on the views of point of some studies related to the overconfidence and the performance of REITs, this paper considers that, as for the results that, first, the education of executive team of “CEO Leadership” that fully displays CEO’s leadership skill and can be considered as “good cooperation team” has significantly positive impact on performance of REITs, and second, there is no significant impact of the executive’s high individual education, the education of executive team of “Dominant CEO” that shows the dominant role of CEO with high education as leading executives with lower education and can be considered as “overconfident director team”, and also the education of executive team of “Team Top 20” that shows the high-educated cooperation among the executives with similar high education and can be considered as “overconfident team” on performance of REITs, respectively, while, as considering the impact of the interactive term of executive’s education and discretionary cash, there is significantly negative impact of the interactive term of executive’s individual education and discretionary cash, and the interactive term of the education of executive team with highly-educated executives (“Dominant CEO” and “Team Top 20”) and discretionary cash on performance of REITs, respectively, can be explained by the overconfidence of executives with high education and the negative impact of more aggressive business strategies of overconfident executives on company performance.

In the second step, as a more comprehensive empirical examination, this paper examines the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs, by employing two examinations.

In the first examination, this paper examines the relationship between the education of executive team of CEO, CFO and COO in which, regardless of CEO’s individual education, there may be zero, one and two of CFO and COO with Top 20 school education and the performance of REITs. In the result, it shows that, consistent with Hypothesis 1, there is no significant relationship between executive’s individual education and the performance of REITs. In addition, there is no explicit and definite result of the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs.

Therefore, in the second examination, for a more accurate and comprehensive result, this paper uses a stricter criterion of CEO’s individual education, as assuming that CEO in the executive team has no Top 20 school education, this paper examines the relationship between the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and there is one, two or at least one of CFO and COO with Top 20 school education and the performance of REITs, respectively.

In the result, consistent with Hypothesis 3, this paper finds that there is significantly positive relationship between the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and at least one of CFO and COO has Top 20 school education and the performance of REITs, and particularly, comparing with the education of executive team of CEO, CFO and COO in which CEO has no Top 20 school education and both CFO and COO have Top 20 school education, there is a more significantly positive relationship between the education of executive team of CEO, CFO and COO in which CEO has no Top 20

school education and one of CFO and COO has Top 20 school education and the performance of REITs. Therefore, the best executive team that has a greater positive impact on performance of REITs is the one in which CEO has no high education, and one of CFO and COO has high education.

In the further research, for more general empirical examination, it would be more comprehensive to study the relationship between the executive's education and company financial performance on the level of the whole industry.

## Reference

Arioglu, E. (2014). Educated professionals on boards at Borsa Istanbul. *Journal of Business Economics and Finance*, 3(3), 259-282.

Bertrand, M., & Schoar, A. (2003). Managing with style: The effect of managers on firm policies. *The Quarterly journal of economics*, 118(4), 1169-1208.

Bhagat, S., Bolton, B. J., & Subramanian, A. (2010). CEO education, CEO turnover, and firm performance. Available at SSRN 1670219.

Darmadi, S. (2013). Board members' education and firm performance: evidence from a developing economy. *International Journal of Commerce and Management*.

Eichholtz, P., & Yönder, E. (2015). CEO overconfidence, REIT investment activity and performance. *Real Estate Economics*, 43(1), 139-162.

Gîrbină, M. M., Albu, C. N., & Albu, N. (2012). Board Members' Financial Education and Firms' Performance: Empirical Evidence for Bucharest Stock Exchange Companies. *International Journal of Economics and Management Engineering*, 6(9), 2343-2347.

Gottesman, A. A., & Morey, M. R. (2006). Does a better education make for better managers? An empirical examination of CEO educational quality and firm performance. *An Empirical Examination of CEO Educational Quality and Firm Performance* (April 21, 2006). Pace University Finance Research Paper, (2004/03).

Jalbert, T., Rao, R. P., & Jalbert, M. (2002). Does school matter? An empirical analysis of CEO education, compensation, and firm performance. *International Business and Economics Research Journal*, 1(1), 83-98.

King, T., Srivastav, A., & Williams, J. (2016). What's in an education? Implications of CEO education for bank performance. *Journal of Corporate Finance*, 37, 287-308.

Miller, D., & Xu, X. (2019). MBA CEOs, short-term management and performance. *Journal of Business Ethics*, 154(2), 285-300.

Mishra, K. C., & Metilda, M. J. (2015). A study on the impact of investment experience, gender,

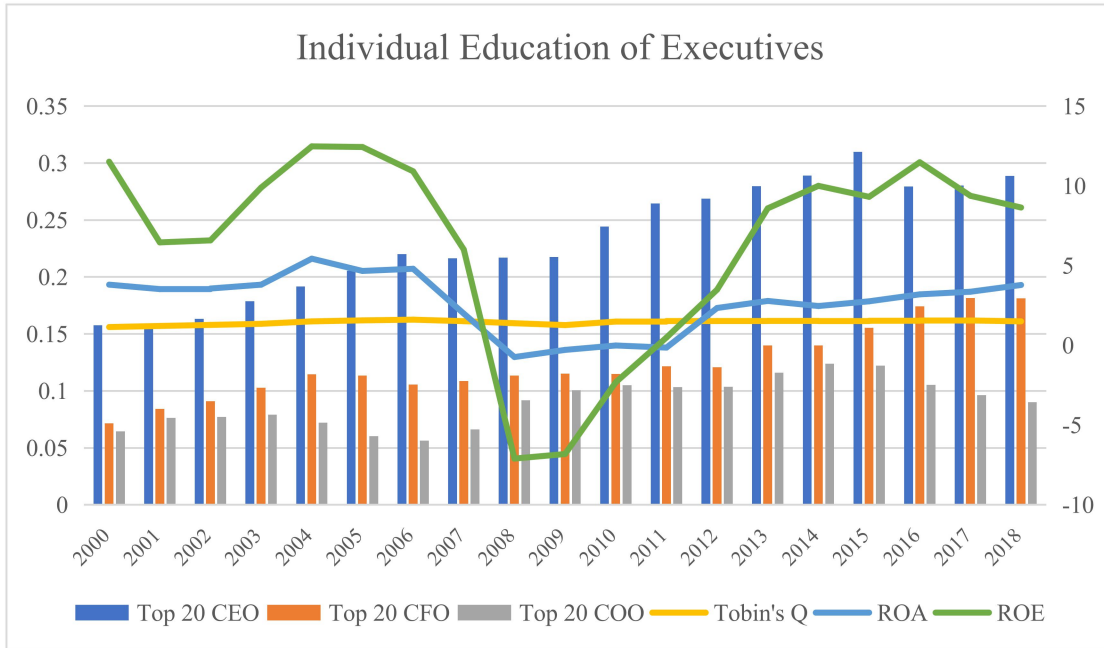
and level of education on overconfidence and self-attribution bias. *IIMB Management Review*, 27(4), 228-239.

Morresi, O. (2017). How much is CEO education worth to a firm? Evidence from European firms. *PSL Quarterly Review*, 70(282).

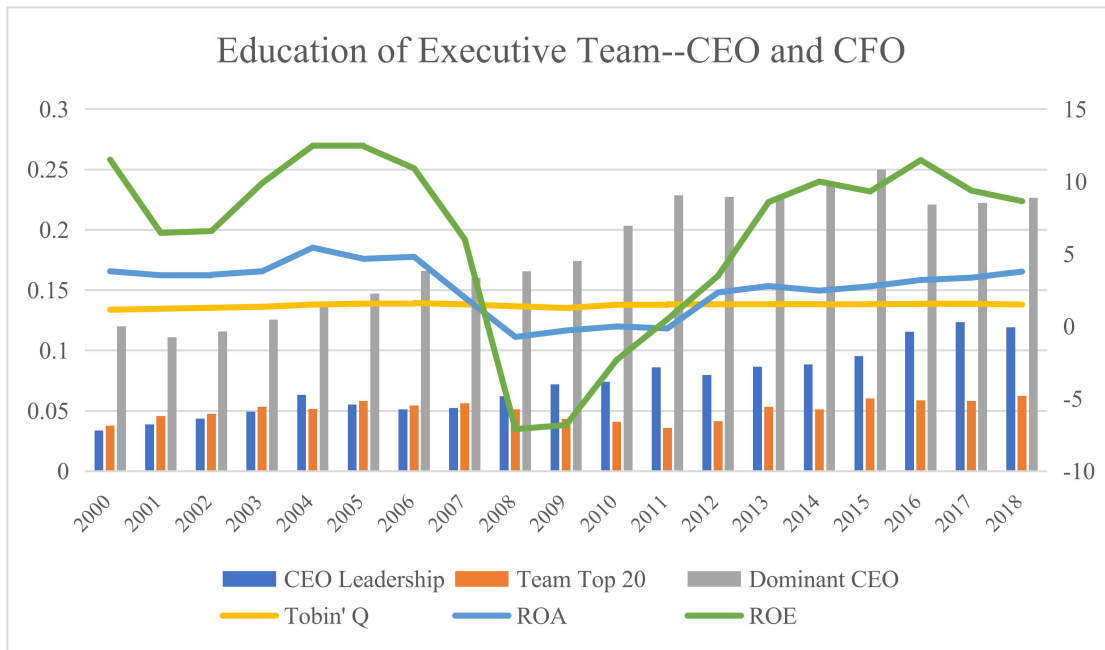
Wai, J., & Rindermann, H. (2015). The path and performance of a company leader: A historical examination of the education and cognitive ability of Fortune 500 CEOs. *Intelligence*, 53, 102-107.

# Appendices

**Figure 1 Individual Education of Executives of REITs**

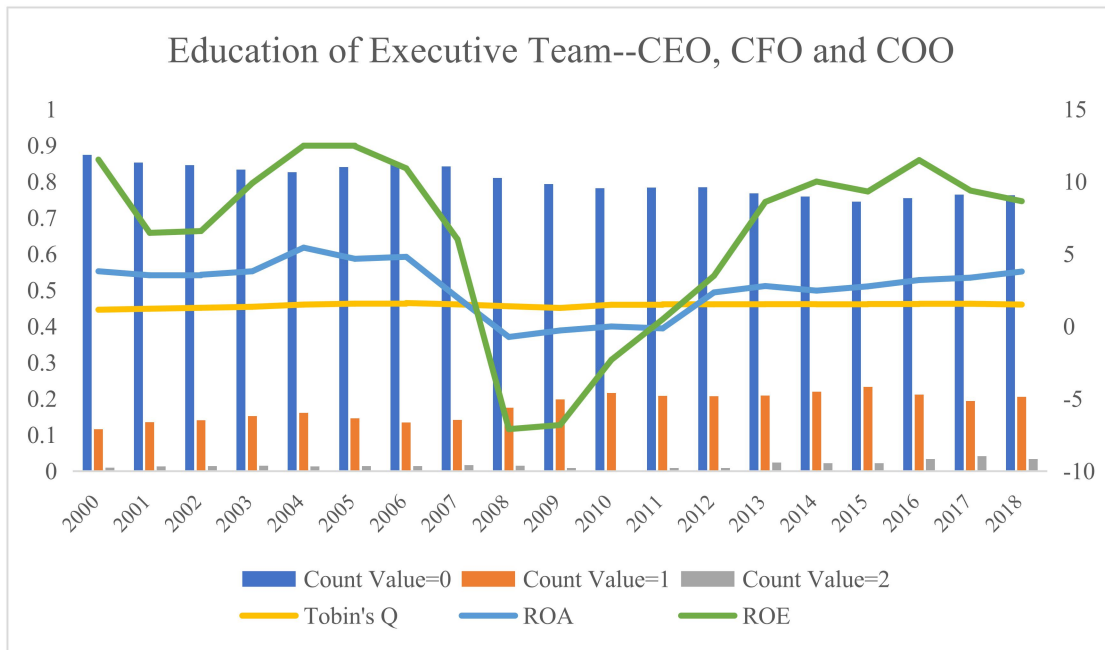


**Figure 2 Education of Executive Team of CEO and CFO of REITs**

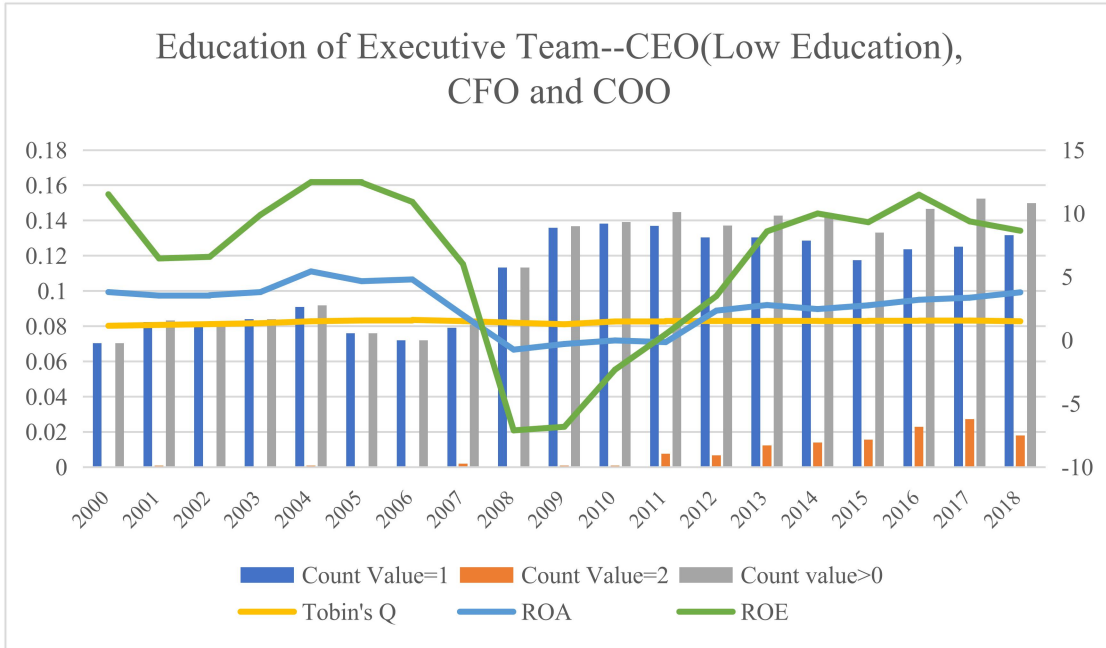




**Figure 3 Education of Executive Team of CEO, CFO and COO of REITs**



**Figure 4 Education of Executive Team of CEO with Lower Education, CFO and COO of REITs**



**Table 1**

Table 1 shows the description of variables statistics.

VARIABLES	Obs.	Mean	Std. Dev.	Min.	Max.
Panel A—Executive’s education					
CEO Top 20	19,730	0.23	0.42	0	1
CFO Top 20	19,730	0.12	0.33	0	1
Team Top 20	19,730	0.05	0.22	0	1
Dominant CEO	19,730	0.18	0.39	0	1
CEO Leadership	19,730	0.07	0.26	0	1
Executives Top 20	19,730	0.22	0.45	0	2
Team Count_1	19,730	0.11	0.31	0	1
Team Count_2	19,730	0.01	0.08	0	1
Team Count_12	19,730	0.12	0.32	0	1
Panel B—Performance					
Tobin’s Q	12,491	1.48	1.09	0.34	35.49
ROA	12,766	2.59	11.95	-397.53	322.40
ROE	12,372	6.44	46.43	-905.31	945.77
Panel C—Financial Control Variables					
Cash Holdings	12,700	0.05	0.08	0	0.99
Assets	12,718	14.42	1.47	7.85	17.46
Debt	12,718	0.50	0.20	0	2.26
Profitability	12,154	6.43	46.26	-905.31	945.77

Notes: Table 1 presents the descriptive statistics. In Panel A, Executive’s education is defined using the executive’s Top 20 school education dummy, at an executive individual level and an executive team level. Top 20 school education dummy refers to the education received by the executive is from the Top 20 schools. In Panel B, Performance is defined using the data of quarterly financial performance of U.S. REITs, specifically, Tobin’s Q, ROA (Return on Assets), and ROE (Return on Equity) are used as financial performance indicators and presented in decimals. This paper uses a set of financial control variables, including the ratio of cash to total assets (in decimals, shown as “Cash Holdings”), the ratio of debt to total assets (in decimals, shown as “Debt”), the natural logarithm of total assets (shown as “Assets”) and Return of Equity (ROE, shown as “Profitability”). All of the financial control variables are lagged. The data range from 2000 to 2018.

**Table 2**

Table 2 shows the proportions of each value of “Executives Top 20”.

VARIABLES	Proportion		
	Count Value =0	Count Value =1	Count Value =2
Executives Top 20	0.80	0.18	0.02

**Table 3**

Table 3 shows the results of Model 1 that examines the relationship between CEO's individual education and the performance of REITs.

VARIABLES	(1) Tobin's Q	(2) Tobin's Q	(3) ROA	(4) ROA	(5) ROE	(6) ROE
CEO Top 20	-0.052 [0.057]	0.056 [0.047]	0.023 [0.310]	0.371 [0.361]	-0.006 [0.912]	1.468 [1.042]
X Cash Holdings		-3.096*** [1.095]		-9.740 [6.688]		-41.214** [19.521]
Cash Holdings	1.377** [0.553]	2.374*** [0.825]	-1.761 [4.285]	1.252 [5.995]	14.553 [15.346]	27.383 [20.419]
Assets	-0.001 [0.067]	0.001 [0.066]	0.233 [0.158]	0.242 [0.157]	1.353*** [0.469]	1.387*** [0.464]
Debt	-0.295* [0.172]	-0.289* [0.168]	-6.832*** [1.305]	-6.796*** [1.272]	-8.212 [5.576]	-8.071 [5.488]
Profitability	0.002*** [0.001]	0.002*** [0.000]	0.025*** [0.004]	0.025*** [0.005]	0.303*** [0.071]	0.302*** [0.071]
Constant	1.555 [1.035]	1.475 [1.009]	2.464 [2.630]	2.214 [2.580]	-11.793* [6.662]	-12.837* [6.600]
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Property Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,233	10,233	10,540	10,540	10,521	10,521
Adjusted R-squared	0.044	0.053	0.045	0.046	0.097	0.098

Notes: Table 3 presents the results of OLS regressions of Model 1 that examines the relationship between CEO's individual education and the performance of REITs. CEO's individual education is defined using the "CEO Top 20" dummy.

These regressions use a set of financial control variables, including the lagged cash-to-total-assets ratio, shown as "Cash Holdings", the lagged natural logarithm of total assets as a proxy for firm size, shown as "Assets", the lagged debt-to-total-assets ratio, shown as "Debt", and the lagged quarterly ROE (Return on Equity), shown as "Profitability". The data range from 2000 to 2018. Heteroskedasticity-robust and firm-clustered standard errors are in brackets. All regressions in Model 1 are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorb the fixed effects of each quarter of the whole period and the property type. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Table 4**

Table 4 shows the results of Model 2 that examines the relationship between CFO's individual education and the performance of REITs.

VARIABLES	(1) Tobin's Q	(2) Tobin's Q	(3) ROA	(4) ROA	(5) ROE	(6) ROE
CFO Top 20	0.053 [0.042]	0.122** [0.056]	0.128 [0.405]	0.357 [0.378]	2.201** [1.095]	3.630*** [1.107]
X Cash Holdings		-2.073** [0.866]		-6.747 [6.945]		-42.243* [23.889]
Cash Holdings	1.367** [0.556]	1.768*** [0.674]	-1.776 [4.289]	-0.591 [5.122]	14.286 [15.462]	21.758 [17.512]
Assets	-0.006 [0.069]	-0.004 [0.068]	0.228 [0.162]	0.234 [0.162]	1.249** [0.487]	1.288*** [0.490]
Debt	-0.291* [0.171]	-0.280* [0.168]	-6.839*** [1.316]	-6.796*** [1.314]	-8.311 [5.632]	-8.041 [5.601]
Profitability	0.002*** [0.001]	0.002*** [0.001]	0.025*** [0.005]	0.025*** [0.005]	0.303*** [0.071]	0.302*** [0.071]
Constant	1.586 [1.045]	1.539 [1.030]	2.532 [2.693]	2.378 [2.699]	-10.596 [6.873]	-11.553* [6.981]
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Property Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,233	10,233	10,540	10,540	10,521	10,521
Adjusted R-squared	0.044	0.046	0.045	0.045	0.097	0.098

Notes: Table 4 presents the results of OLS regressions of Model 2 that examines the relationship between CFO's individual education and performance of REITs. CFO's individual education is defined using the "CFO Top 20" dummy.

These regressions use a set of financial control variables, including the lagged cash-to-total-assets ratio, shown as "Cash Holdings", the lagged natural logarithm of total assets as a proxy for firm size, shown as "Assets", the lagged debt-to-total-assets ratio, shown as "Debt", and the lagged quarterly ROE (Return on Equity), shown as "Profitability". The data range from 2000 to 2018. Heteroskedasticity-robust and firm-clustered standard errors are in brackets. All regressions in Model 2 are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorb the fixed effects of each quarter of the whole period and the property type. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Table 5**

Table 5 shows the results of Model 3 that examines the relationship between the education of executive team of CEO and CFO and the performance of REITs.

VARIABLES	(1) Tobin's Q	(2) Tobin's Q	(3) ROA	(4) ROA	(5) ROE	(6) ROE
CEO Leadership	0.109** [0.053]	0.163*** [0.058]	0.730** [0.353]	1.323** [0.578]	3.992** [1.653]	6.407*** [2.369]
X Cash Holdings		-1.698 [1.049]		-19.091 [13.501]		-77.855 [57.936]
Cash Holdings	1.796** [0.800]	1.962** [0.879]	4.200 [5.676]	5.816 [6.132]	16.816 [19.673]	23.431 [19.661]
Assets	0.064*** [0.020]	0.064*** [0.020]	0.506*** [0.191]	0.510*** [0.194]	2.300*** [0.636]	2.317*** [0.635]
Debt	-0.138 [0.206]	-0.141 [0.206]	-4.252* [2.167]	-4.269** [2.163]	-11.326 [7.485]	-11.396 [7.372]
Profitability	0.002*** [0.000]	0.002*** [0.000]	0.022*** [0.005]	0.023*** [0.005]	0.369*** [0.107]	0.370*** [0.107]
Constant	0.457 [0.304]	0.447 [0.304]	-3.219 [3.505]	-3.341 [3.547]	-25.621** [10.264]	-26.079** [10.256]
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Property Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,722	6,722	6,765	6,765	6,751	6,751
Adjusted R-squared	0.201	0.206	0.049	0.051	0.135	0.137

Notes: Table 5 presents the results of OLS regressions of Model 3 that examines the relationship between the education of executive team of CEO and CFO and the performance of REITs. The education of executive team of CEO and CFO in Model 3 is defined using the “CEO Leadership” dummy.

These regressions use a set of financial control variables, including the lagged cash-to-total-assets ratio, shown as “Cash Holdings”, the lagged natural logarithm of total assets as a proxy for firm size, shown as “Assets”, the lagged debt-to-total-assets ratio, shown as “Debt”, and the lagged quarterly ROE (Return on Equity), shown as “Profitability”. The data range from 2000 to 2018. Heteroskedasticity-robust and firm-clustered standard errors are in brackets. All regressions in Model 3 are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorb the fixed effects of each quarter of the whole period and the property type. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Table 6**

Table 6 shows the results of Model 4 that examines the relationship between the education of executive team of CEO and CFO and the performance of REITs.

VARIABLES	(1) Tobin's Q	(2) Tobin's Q	(3) ROA	(4) ROA	(5) ROE	(6) ROE
Team Top 20	-0.049 [0.050]	0.027 [0.050]	-0.649 [0.717]	-0.452 [0.806]	-0.484 [1.148]	0.341 [1.351]
X Cash Holdings		-2.152** [0.961]		-5.412 [7.477]		-22.667 [22.035]
Cash Holdings	1.795** [0.798]	2.105** [0.895]	4.255 [5.652]	5.051 [6.612]	16.382 [19.628]	19.755 [22.298]
Assets	0.067*** [0.020]	0.068*** [0.020]	0.537*** [0.205]	0.541*** [0.204]	2.353*** [0.648]	2.368*** [0.653]
Debt	-0.137 [0.206]	-0.128 [0.203]	-4.238* [2.166]	-4.213** [2.137]	-11.311 [7.457]	-11.211 [7.442]
Profitability	0.002*** [0.000]	0.002*** [0.000]	0.023*** [0.005]	0.023*** [0.006]	0.370*** [0.107]	0.370*** [0.108]
Constant	0.433 [0.311]	0.396 [0.304]	-3.529 [3.693]	-3.622 [3.650]	-25.843** [10.517]	-26.228** [10.644]
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Property Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,722	6,722	6,765	6,765	6,751	6,751
Adjusted R-squared	0.196	0.207	0.049	0.049	0.134	0.134

Notes: Table 6 presents the results of OLS regressions of Model 4 that examines the relationship between the education of executive team of CEO and CFO and the performance of REITs. The education of executive team of CEO and CFO in Model 4 is defined using the “Team Top 20” dummy.

These regressions use a set of financial control variables, including the lagged cash-to-total-assets ratio, shown as “Cash Holdings”, the lagged natural logarithm of total assets as a proxy for firm size, shown as “Assets”, the lagged debt-to-total-assets ratio, shown as “Debt”, and the lagged quarterly ROE (Return on Equity), shown as “Profitability”. The data range from 2000 to 2018. Heteroskedasticity-robust and firm-clustered standard errors are in brackets. All regressions in Model 4 are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorb the fixed effects of each quarter of the whole period and the property type. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10



**Table 7**

Table 7 shows the results of Model 5 that examines the relationship between the education of executive team of CEO and CFO and the performance of REITs.

VARIABLES	(1) Tobin's Q	(2) Tobin's Q	(3) ROA	(4) ROA	(5) ROE	(6) ROE
Dominant CEO	-0.002 [0.043]	0.094* [0.050]	-0.069 [0.291]	0.511 [0.339]	-0.446 [1.171]	1.001 [1.344]
X Cash Holdings		-2.966*** [1.043]		-17.595** [7.829]		-43.837* [22.890]
Cash Holdings	1.784** [0.799]	2.311** [0.952]	4.091 [5.656]	7.351 [6.785]	16.214 [19.509]	24.433 [22.784]
Assets	0.065*** [0.020]	0.068*** [0.020]	0.513*** [0.193]	0.529*** [0.193]	2.339*** [0.626]	2.379*** [0.633]
Debt	-0.138 [0.206]	-0.152 [0.203]	-4.249* [2.162]	-4.355** [2.134]	-11.300 [7.450]	-11.581 [7.243]
Profitability	0.002*** [0.000]	0.002*** [0.000]	0.023*** [0.006]	0.022*** [0.006]	0.370*** [0.107]	0.368*** [0.108]
Constant	0.457 [0.310]	0.396 [0.308]	-3.211 [3.535]	-3.519 [3.497]	-25.562** [10.234]	-26.326** [10.300]
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Property Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,722	6,722	6,765	6,765	6,751	6,751
Adjusted R-squared	0.195	0.222	0.049	0.051	0.134	0.135

Notes: Table 7 presents the results of OLS regressions of Model 5 that examines the relationship between the education of executive team of CEO and CFO and the performance of REITs. The education of executive team of CEO and CFO in Model 5 is defined using the “Dominant CEO” dummy.

These regressions use a set of financial control variables, including the lagged cash-to-total-assets ratio, shown as “Cash Holdings”, the lagged natural logarithm of total assets as a proxy for firm size, shown as “Assets”, the lagged debt-to-total-assets ratio, shown as “Debt”, and the lagged quarterly ROE (Return on Equity), shown as “Profitability”. The data range from 2000 to 2018. Heteroskedasticity-robust and firm-clustered standard errors are in brackets. All regressions in Model 5 are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorb the fixed effects of each quarter of the whole period and the property type. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Table 8**

Table 8 shows the results of Model 6 that examines the relationship between the education of executive team of CEO, CFO and COO and the financial performance of REITs.

VARIABLES	(1) Tobin's Q	(2) Tobin's Q	(3) ROA	(4) ROA	(5) ROE	(6) ROE
CEO Top 20	-0.071 [0.065]		-0.400 [0.506]		-2.452 [1.975]	
Executives Top 20	0.046 [0.036]	0.036 [0.035]	-0.201 [0.451]	-0.261 [0.498]	0.660 [1.003]	0.288 [0.926]
Cash Holdings	1.605 [1.069]	1.580 [1.069]	1.967 [7.146]	1.809 [7.047]	13.021 [15.415]	12.054 [15.440]
Assets	0.077** [0.030]	0.075** [0.030]	0.756*** [0.267]	0.744*** [0.257]	1.630** [0.794]	1.558* [0.820]
Debt	-0.070 [0.247]	-0.084 [0.246]	-1.973 [3.431]	-2.045 [3.383]	-0.397 [7.249]	-0.846 [7.065]
Profitability	0.003*** [0.001]	0.003*** [0.001]	0.019** [0.010]	0.020** [0.009]	0.224** [0.091]	0.225** [0.092]
Constant	0.231 [0.440]	0.248 [0.442]	-7.864 [5.214]	-7.783 [5.150]	-18.661 [11.604]	-18.164 [11.751]
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Property Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,436	3,436	3,453	3,453	3,449	3,449
Adjusted R-squared	0.189	0.184	0.032	0.032	0.071	0.070

Notes: Table 8 presents the results of OLS regressions of Model 6 that examines the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. CEO's individual education in Model 6 is defined using the "CEO Top 20" dummy. The education of executive team of CEO, CFO and COO in Model 6 is defined using the "Executives Top 20" dummy.

These regressions use a set of financial control variables, including the lagged cash-to-total-assets ratio, shown as "Cash Holdings", the lagged natural logarithm of total assets as a proxy for firm size, shown as "Assets", the lagged debt-to-total-assets ratio, shown as "Debt", and the lagged quarterly ROE (Return on Equity), shown as "Profitability". The data range from 2000 to 2018. Heteroskedasticity-robust and firm-clustered standard errors are in brackets. All regressions in Model 6 are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorb the fixed effects of each quarter of the whole period and the property type. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10

**Table 9**

Table 9 shows the results of Model 7 and Model 8 that examine the relationship between the education of executive team of CEO, CFO and COO and the financial performance of REITs.

VARIABLES	(1) Tobin's Q	(2) ROA	(3) ROE	(4) Tobin's Q	(5) ROA	(6) ROE
Team Count_1	0.144** [0.060]	1.070** [0.504]	3.187* [1.750]			
Team Count_2	0.195* [0.118]	0.935 [0.944]	2.103 [2.199]			
Cash Holdings	1.613 [1.061]	1.909 [7.012]	12.748 [15.310]	1.615 [1.061]	1.904 [7.008]	12.703 [15.302]
Assets	0.077*** [0.029]	0.751*** [0.246]	1.615** [0.802]	0.078*** [0.028]	0.750*** [0.246]	1.602** [0.810]
Debt	-0.081 [0.245]	-2.335 [3.117]	-1.102 [6.827]	-0.083 [0.245]	-2.330 [3.119]	-1.061 [6.854]
Profitability	0.003*** [0.001]	0.019** [0.009]	0.223** [0.092]	0.003*** [0.001]	0.019** [0.009]	0.223** [0.092]
Team Count_12				0.150** [0.058]	1.052** [0.471]	3.044* [1.575]
Constant	0.197 [0.430]	-8.118 [5.106]	-19.427* [11.500]	0.188 [0.425]	-8.096 [5.101]	-19.250* [11.577]
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Property Type	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,436	3,453	3,449	3,436	3,453	3,449
Adjusted R-squared	0.197	0.033	0.071	0.197	0.034	0.072

Notes: Table 9 presents the results of OLS regressions of Model 7 and Model 8 that examines the relationship between the education of executive team of CEO, CFO and COO and the performance of REITs. The education of executive team of CEO, CFO and COO in Model 7 and Model 8 is defined using the “Team Count\_1” dummy, “Team Count\_2” dummy and “Team Count\_12” dummy.

These regressions use a set of financial control variables, including the lagged cash-to-total-assets ratio, shown as “Cash Holdings”, the lagged natural logarithm of total assets as a proxy for firm size, shown as “Assets”, the lagged debt-to-total-assets ratio, shown as “Debt”, and the lagged quarterly ROE (Return on Equity), shown as “Profitability”. The data range from 2000 to 2018. Heteroskedasticity-robust and firm-clustered standard errors are in brackets. All regressions in Model 7 and Model 8 are with the standard errors robust to heteroskedasticity, clustered by the firm, and also absorb the fixed effects of each quarter of the whole period and the property type. \*, \*\* and \*\*\* indicate significance at the 10%, 5% and 1% level, respectively.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10