

CEO Equity-Based Compensation and Goodwill Recognition Using the Purchase Price Allocation Setting

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الملخص:

يهدف هذا البحث الي قياس أثر حوافز المديرين التنفيذيين و وبالأخص الحوافز المبنية علي الأسهم علي تحديد قيمة الشهرة بعد الاستحواذ. من أجل تحقيق هذا الهدف سيم اختبار بعض الفروض ، وهي، توجد علاقة ايجابية مباشرة بين علاوة المديرين التنفيذيين (خيارات الأسهم) و قيمة الشهرة بعد الاستحواذ، توجد علاقة ايجابية بين خيارات الأسهم و قيمة الشهرة بعد الاستحواذ اذا كان المدير ذو خبرة، توجد علاقة ايجابية بين خيارات الأسهم و قيمة الشهرة بعد الاستحواذ في حال أسعار اسهم الشركة المستحوذة، يتلاعب المديرين الذكور في رقم الشهرة اكثر من مثلهم من الإناث.

و يعتمد هذا البحث في التحليل على البيانات الثانوية و بصفة أساسية على القوائم المالية للشركات الأمريكية العامة المسجلة بالبورصة. كما يعتمد بصورة رئيسية على وضع توزيع سعر الشراء (Purchase Price Allocation) لدراسة النتائج المحاسبية لهذا البحث لأسباب عديدة. أولاً: ان تحديد أسعار الشراء المبني على القيمة العادلة هو موضوع مثير للأهمية في الآونة الاخيرة. ثانياً: يعتبر الاستحواذ من القرارات المميزة الخاصة بالأعمال ذات التأثير طويل المدى على التقارير المالية. وكنتيجة لميزتها الإقتصادية فإن توزيع سعر الشراء يعتبر أداة قوية لتحديد تأثير العوامل المختلفة المؤثرة على التقرير.

و يعتبر هذا البحث مهم من الناحية الأكاديمية حيث حدثت الموضوع و قلة الأبحاث و الدراسات التي تناولت هذا الموضوع، إضافة الى التحديات المتعلقة بعقود المكافآت التي تواجه الشركات خاصة بعد الاستحواذ، مما ألقى العبء على المجال الأكاديمي بضرورة تناول هذا الموضوع و ذلك سعياً لتطوير عقود المكافآت و زيادة جودة التقارير المالية. و تعد الأهمية الأخرى لهذه الدراسة هي الأهمية العملية والتي تتضح من خلال الدور الذي تلعبه القيمة العادلة بعد عملية الاستحواذ و لذلك تتمثل أهمية هذا البحث في ضرورة إجراء دراسة ميدانية لتحليل أثر مكافآت المديرين التنفيذيين على دقة تحديد القيمة العادلة لأصول الشركة بعد الاستحواذ.

في سبيل تحقيق كل من الأهداف الرئيسية و الأهداف الفرعية لهذه الدراسة و اختبار مدى صحة الفروض الموضوعية ، تم تقسيم البحث إلى عدة مباحث و هي؛ المقدمة والدراسات السابقة، صياغة الفروض، منهجية البحث، نتائج الدراسة التطبيقية، و أخيراً النتائج والتوصيات.



Abstract:

This study examines the relationship between CEO equity based compensation and the amount recognized as goodwill from mergers and acquisitions. CEO stock options grants and options exercised has been chosen to represent the different forms of equity based compensation. Also, the study investigates the effect of CEO characteristics such as gender, age and tenure on goodwill recognition. The researcher uses a sample of 108 public U.S business combinations completed in the service sector between 2002 and 2015. Results of the study indicates that there is no direct relationship between stock option grants and goodwill but CEOs with higher stock options grants in their compensation package recognize more goodwill only if the acquirer stock prices are high. Also, CEOs with higher options exercised in the acquisition announcement year, recognize more goodwill and this relationship becomes stronger when CEO has long tenure. Also, the researcher finds negative relationship between higher representation of CEO male and goodwill recognition.

Keywords: CEO. Executive Compensation, Fair Value, Mergers, Acquisitions, stock option grants, options exercised, Goodwill.



1. Introduction and Background

Recent studies document a positive correlation between CEOs' compensation and earnings manipulation. Managers whose equity-based compensation is more sensitive to company share prices tend to use more aggressive discretionary components of earnings to affect their firms' reported performance.

A series of recent studies document a positive correlation between CEOs' equity incentives and earnings manipulation (Cheng & Warfield 2005, Bergstresser & Philippon 2006, Burns & Kedia 2006, Efendi et al. 2007, Peng & Röell 2008, Johnson et al. 2009). However, there is disagreement about which part of CEOs' equity incentives are the motive, with some studies linking manipulation to option (but not stock) incentives, and others linking manipulation to stock holdings (but not option). Moreover, the evidence for a connection between equity incentives and accounting irregularities is not common.

In addition, many studies have shown that managers exercise large amounts of stock options and sell larger shares during years in which abnormal accruals make up a large part of reported earnings (Xie, 2001; Bergstresser and Philippon, 2006). Although some studies such as Armstrong, Jagolinzer,



and Larcker (2010) do not find evidence that equity-based compensation provide incentives to manipulate accounting reports, others such as Ke (2003), Gao and Shrieves (2002), Cheng and Warfield (2005), and Crocker and Slemrod (2007) find that Equity-based compensation may provide financial motivation for managers to manipulate earnings and misrepresent the firm's true value. This implies that managers whose equity-based compensation is more sensitive to company share prices tend to use more aggressive discretionary components of earnings to affect their firms' reported performance.

Recently, Weng et al. (2014) find that managers with equity-based compensation are more likely to use aggressive accounting choices especially when they are covered by excess directors and officers (D&O) liability insurance. Jahmani et al. (2010) strongly suggest that companies are using SFAS No. 142 to manage the volatility of their earnings and that goodwill recognition is a new window for earnings management. Pfeiffer & Shields (2015) posit that compensation plans impact market prices. In contemporary days, companies are revising their CEO compensation schemes because investors and some shareholders argue that using stock to reward CEOs encourage risky and short-term thinking particularly when CEOs focus on raising the stock prices of a company in the short term so that their options may



be exercised at high value (Jarque & Fed, 2014). Devers et al. (2013) asserts that directors have a tendency to reward their acquiring CEOs with stock options after acquisitions.

Boennen and Glaum (2014) provide a review of the empirical literature on the accounting for goodwill on research undertaken since the introduction of the "impairment-only approach" of SFAS 141/142 and IFRS 3 / IAS 36 (rev. 2004). They state that previous studies focus on cash bonuses and do not consider other variable components of management compensation that may also be related to goodwill recognition (e.g. stock option grants).

Goodwill treatment is different from other sorts of tangible and intangible assets because it requires periodic fair-value-based impairment tests. Write-offs of goodwill is unamortized and subject to a periodic fair-value test that leads to higher post-acquisition earnings. Equity based pay of CEO is reduced as a consequence of goodwill impairment. Negative market sentiment is created as a result of write-offs. There is strong association between equity based pay and stock performance that in turn affects CEO pay significantly. All this indicates that CEO pay is likely to be affected as a result of the misallocation of goodwill.

This study extends the growing research by investigating some research questions; What is the impact of CEO equity-based compensation (stock options grants and



stock exercised) on goodwill recognition after merger and acquisition?, Does CEO tenure moderate the relationship between CEO equity compensation and goodwill recognition? The overall aim of this study is to examine the relationship between executive compensation structure and fair value accounting on business combination context. In order to achieve the stated aim, some objectives have been identified. These are as follows: 1. Examining the impact of CEO stock options grants and stock exercised on post-acquisition goodwill recognition, and 2. Exploring the moderating effect of CEO characteristics on goodwill recognition. 3. Investigating the moderating role of the acquirer stock price on the relationship between CEO equity based compensation and goodwill recognition.

Considering the prior literature, this study contributes to the nascent but growing literature on post-acquisition fair value measurement in several ways. First, the study takes into consideration the industry effect on goodwill accounting by using data on service sector companies. This is because per the nature of operation of service industry, companies generate a greater amount of intangible assets than property plant and equipment. As a result, service companies' decisions about intangible assets including goodwill are more influential than other industries.



The remainder of the paper is structured as follows. The second section introducing the hypotheses of the study while the third section presents the research design and methodology. The fourth section presents the results and the discussion. The last section includes conclusion and limitation of the study.

2. Hypotheses Development

2.1 CEO stock option grants and the Amount of Goodwill

Some literature focused on examining the relationship between CEO equity based compensation, goodwill and their effect on stock prices. On the one hand, Shalev et. al. (2013) state that the relationship between goodwill and changes in stock prices is not quite obvious. On the other hand, other studies show the existence of a relationship between goodwill impairment write-offs and stock returns and find that goodwill write-offs are associated with stock returns. This suggests that the impairment is value relevant and reflected in firm stock prices (Lhaopadchan, 2010). For example, Dechow et al. (1995), Gaver, and Gaver (1998) find that goodwill impairment charges have a limited impact on CEO bonuses, but at the same time have a negative effect on CEO equity-based pay. Li et al. (2005) find that after the occurrence of impairment loss, analysts negatively revised their expectations which support the idea that goodwill impairment is of relevant



value. Because goodwill impairment is related to economic factors, it is a good reflection of the company stock prices and can be a good future predictor of stock prices. Both Li et al. (2011) and Bens et al. (2007) focus on the point that goodwill impairment write-offs evoke significant negative market reactions. Given the strong correlation between equity-based pay and stock performance, the write down decision can be a signal of firm performance from management to investors and such market adjustments can lead to a reduction in CEO equity-based pay. Thus, even if the market fails to completely see through the overstatement of goodwill before the announcement of an impairment loss and CEO equity-based pay temporarily benefits from the overstatement, the reduction in equity-based pay in the impairment year can create disincentives for overstating goodwill.

According to Darrough et al. (2014), there is a significant decline in option-based compensation of CEOs when organizations recognize goodwill impairment losses. They discovered that there is a tendency for compensation committees to make CEOs incur costs for “non-value maximizing acquisitions” in order to discourage them from undertaking riskier investment. Heitzman (2006) states that Equity grants are positively related to acquisition premiums for target firms that do not initiate the sale. They find that equity awards to the target CEO reflect the CEO’s and board’s



information and incentives relating to the upcoming acquisition. This is consistent with shareholder wealth maximization within the market for corporate control. As CEOs focus on raising the stock prices of a company in the short term so that their options may be exercised at high value (Jarque & Fed, 2014), they will tend to avoid goodwill impairment that reduce the stock price. They achieve this by reducing the amount recognized as goodwill in the purchase price allocation process.

Collectively, the above discussions suggest that overstating goodwill has two opposite effects on the company's stock prices. On the one hand, goodwill value is related to the company or the acquirer performance which in turn direct investor confidence along with guiding evaluation of stock prices. A company with high goodwill tends to attract investors, as it makes them believe that the company is capable of generating higher profits in the future. So, in general, news of an acquisition, which means expansion for a company, tends to increase stock prices. On the other hand, the news of the acquisition increases the likelihood of impairment write offs in the future that makes negative market reaction and reduces the stock price that most likely results in a reduction in CEO equity-based compensation. So, CEOs may tend to understate the amount of goodwill or at least maintain its value to avoid decreasing the stock prices



resulting from the future impairment write off and thus increase their compensation or at least maintain their compensation level. Based on this proposition, I hypothesize a relationship between goodwill recognized and CEO equity based compensation but don't determine the direction of this relation. Because equity based compensation consists of several types, sometimes it reaches to eleven types, it is hard to cover all of them in one study. So, this study focus on two important types which are stock options grants and stock exercised. So, based on the above proposition, the following hypothesis is developed:

H1: After an acquisition, there is a relationship between the amounts recognized as goodwill and the CEO stock options grants.

2.2. The Moderating Effect of Acquirer Average Stock Price on the Relationship between Stock Option Grants and Goodwill.

Prior researches have documented a relationship between a company's goodwill and its stock prices. As goodwill value is tagged to the company or the acquirer performance which in turn direct investor confidence along with guiding evaluation of stock prices. A company with high goodwill tends to attract investors, as it makes them believe that the company is capable of generating higher profits in the



future. So, in general, news of an acquisition, that means expansion for a company, tends to increase stock prices.

Other researches also document that there is a strong relationship between CEO stock options grants and stock price (Wheeler and Peter 2004; Hall 2003). CEOs whose abilities match the needs of the company may be attracted by stock options because they believe that their abilities will improve company performance and that this will be reflected in an enhanced stock price. Holders of employee stock options have an incentive to act in a way that increases the value of the options.

The fair value of employee stock options is, as described above, sensitive to the company's stock price, the expected volatility of the stock, and the dividends expected to be paid on the stock during the life of the options. Employees may act, through enhanced performance, to increase company performance, and that in turn may be reflected in the stock price. I, therefore, hypothesize that acquirer stock price, which is calculated as the acquirer average stock price two years after the acquisition announcement date, moderates the relationship between goodwill and CEO stock options grants.

H2: After an acquisition, CEO with higher stock option grants tend to recognize more goodwill only when the acquirer stock prices are high.



2.3. The Moderating Effect of CEO gender on the Relationship between CEO Stock Option Grants compensation and Goodwill.

Recent literature such as Huang and Kisgen (2013) provide evidence that male CEOs make more acquisitions than female CEOs. Peni and Vahamaa (2010) also, provide evidence that firms with female executives are associated with income-decreasing discretionary accruals, thereby implying that female executives are following more conservative earnings management strategies. CEO gender is included in the model as a control variable to control of CEO characteristics as one of the determinants of the amounts to be recognized as goodwill. based on that, the following hypothesis is developed:

H3: After an acquisition, Male CEO with higher stock option grants tend to recognize more goodwill.

3. Research Design and Methodology

3.1 Sample Description

This study employs a sample of 108 US public service firms over the period 2002-2014. Data about the Sample of the study has been collected from several databases including; Thomson Financials Securities Data Company (SDC) database for deals information, the Securities and Exchange Commission (SEC) website for purchase price allocation and



goodwill data (10-K SEC filing), Wharton Research Data Services (WRDS) database (ExecuComp) for data about CEO equity-based compensation, tenure, gender, and age, and (Compustat Fundamental annual files) for the financial data for the acquirers and the targets.

The year 2002 is chosen as the start date of the research sample because companies are required to disclose the allocation of purchase price since SFAS 142 became effective in July 2001. The acquirer and the target are required to be US publicly traded in order to obtain their financial and stock price data. Also, the researcher chooses to unify the industry of the acquirer and the target for some reasons:

First, companies operating in the service industry are likely to generate a significant amount of intangible assets and small amount of property, plant and equipment (PPE). This makes their accounting decisions about intangibles including goodwill important and affects their financial position. Second, the service industry firms (SIC code from 7000 to 8990) are the most active in M & A operations for example: Zhang and Zhang 2007 reports that among all target firms the business service industry (2-digit SIC code 73) is the most which support homogeneous sample. Shalev et al. 2011 find that in the sample 33% of the acquired firms and 28.6% of the acquirers were from the business service. Third, the cross industry model requires to model different industry specific



intangible assets from different industries which is difficult and may affect the PPA. (Ex: publication rights and licensing agreements in the publishing industry and patents on drugs in the pharmaceutical industry). Fourth, the purchase price allocation may be affected by the industry of the target based on Zhang and Zhang (2007) a matter which may affect the results of the study if the sample includes different industries.

The researcher uses the SAS statistical program to merge the tables of the data from different sources to reach the final table of all the data required for the final sample. The research final sample consists of 108 firm year observations of service firms from the period 2002 to 2014 used in the univariate analyses as the final or full sample.

3.2 Methodology:

- To test H1, the researcher follows the regression model constructed by Detzen and Zulch (2012):

$$\begin{aligned}
 GW = & \alpha_0 + \alpha_1 SOG + \alpha_2 SYNERGY + \alpha_3 TRG.BTM \\
 & + \alpha_4 STOCK + \alpha_5 SIZE + \alpha_6 Acq.MTB \\
 & + \alpha_7 Gender + \alpha_8 Tenure + \alpha_9 Age + \\
 & \epsilon \quad (1)
 \end{aligned}$$

Where:

GW is the dependent variable that refers to the amounts of goodwill recognized after an acquisition and disclosed in the acquirer balance sheet in the purchase price allocation setting divided by the total purchase price. **SOG** is the CEO



stock options grants at the acquisition announcement year. **Synergy** is one of the control variables as it represents one of the economic determinants of goodwill recognized. It refers to the fair value of the expected gains from the combination for both the acquirer and the target. Following Bradley et al. (1988) and Detzen and Zulch (2012), synergy is calculated as the positive changes in target's and acquirer's market value after the merger announcement divided by the total acquisition cost. The changes in market values are estimated as the sum of abnormal changes in market value over a three-day window around the merger announcement (-1,1, +1). Normal returns estimated based on a market model using a 200-day window prior to the announcement day using the Eventus database on WRDS website. **Tgt BTM** is the second economic determinant for the amount of goodwill recognized form the acquisition. It refers to the fair value of the 'going concern' element of the target or the ability of the target to earn a higher rate of return from the combination of net assets than from those operating separately in the market. Target BTM is calculated one year before the acquisition announcement date to exclude the effect of the combination from the data. **Stock** is the third economic determinant for the amount of goodwill recognized form the acquisition. It is a dummy variable that take the value of 1 or 0 if the acquirer paid for the acquisition by stocks (even partially) or totally in cash respectively. It is a



proxy for the acquirer overpayment. The researcher argues, based on previous literature, that acquirers are more likely to complete the acquisition using stocks if they are overvalued. In this case, they will be able to over pay for the target and pay higher prices than estimated. **Size** is the fourth economic determinant for the amount of goodwill recognized form the acquisition. It refers to the target size related to the acquirer and calculated by dividing the total purchase price over the acquirer's total pre-acquisition assets (one year before the acquisition announcement date). The researcher argues that higher size ratio means large amounts are paid by the acquirer to purchase the target which highly affect the acquirer balance sheet and lead the manager to highly examine the acquisition to avoid the overpayment. **Acq. MTB** refers to the acquire market to book ratio of equity one year before the acquisition announcement year. Following Zhang and Zhang 2007, the researcher argues that acquirers with higher MTB ratio who can recognize better targets to generate higher synergies and growth record more goodwill to reflect the unrecognized growth options of the target. **Gender** is a dummy variable that take the value of 1 or 0 if the acquirer CEO is male or female respectively. Based on the previous literature, the researcher argues that male CEO recognizes more goodwill than female. This will be explained in details in the next section. **Tenure** is the CEO's number of years of work with the acquirer's



company. **Age** is the CEO age at the acquisition announcement year.

- To test H2, the researcher constructs the following regression model:

$$\begin{aligned}
 GW = & \alpha_0 + \alpha_1 SOGRATIO + \alpha_2 AVSTPR.SOG \\
 & + \alpha_3 SYNERGY + \alpha_4 TRG.BTM + \alpha_5 STOCK \\
 & + \alpha_6 SIZE + \alpha_7 ACQ.MTB + \alpha_8 AGE \\
 & + \alpha_9 Gender + \epsilon \quad (2)
 \end{aligned}$$

Where:

SOGRATIO is the CEO stock options grants at the acquisition announcement year.

AVSTPR.SOG is the interaction term of the CEO stock option grants multiplied by the acquirer stock prices. (Other variables are defined above under model 1).

- To test H3, the researcher constructs the following regression model:

$$\begin{aligned}
 GW = & \alpha_0 + \alpha_1 SOGRATIO + \alpha_2 GNSOG \\
 & + \alpha_3 SYNERGY + \alpha_4 TRG.BTM \\
 & + \alpha_5 STOCK + \alpha_6 SIZE + \alpha_7 ACQ.MTB \\
 & + \alpha_8 TENURE + \alpha_9 AGE + \epsilon \quad (3)
 \end{aligned}$$

4. Results and Discussion

4.1 CEO Stock Option Grants and Goodwill Recognized:

In model (1) as shown below in table 1 Panel A and B, I



include stock option grants ratio (SOG RATIO), calculated as the number of options granted to CEO multiplied by market price of stock on date of grant at the announcement year, as the independent variable to test the relation with goodwill (the dependent variable) while controlling for both the economic determinant of the amount of goodwill and CEO characteristics.

I hypothesize that there is a relationship between stock option grants and the amounts recognized as goodwill. CEO with higher stock options grants ratio tends to increase the goodwill to increase the company income and thus performance. This will result in increasing the company share prices and consequently the CEO stock options grants value that depend mainly on the company stock price.

I run the model based on 108 observations, using multiple linear regression model. The results presented below in table 1 (panel A and B) show that the overall regression model is significant $F = 4.071$, $P < 0.001$. Adjusted R-square of 20.5 % is obtained. SOG has positive non-significant relationship with goodwill with a coefficient of 0.013 and p-value of 0.583. The results of model 1 do not confirm the study hypothesis H1: "After an acquisition, there is a direct relationship between the amounts recognized as goodwill and CEO Stock Option Grants."



Table 1: Multiple Regression Results for H1

PANEL A: Regression Model (1)
$ \begin{aligned} GW = & \alpha_0 + \alpha_1 SOG\ RATIO + \alpha_2 SYNERGY \\ & + \alpha_3 TRG.BTM + \alpha_4 STOCK + \alpha_5 SIZE \\ & + \alpha_6 Acq.MTB + \alpha_7 GENDER + \alpha_8 TENURE \\ & + \alpha_9 AGE + \epsilon \end{aligned} $

PANEL B: Estimation of Regression Model, N = 108
(F= 4.071, P <0.001, R-square = 0.272, Adj R-Square = 0.205)

4.2 The Moderating Effect of Acquirer Average Stock Price on the Relationship between Stock Options Grants and Goodwill

I hypothesize that acquirer stock price, which is calculated as the acquirer average stock price two years after the acquisition announcement date, moderates the relationship between goodwill and CEO stock options grants.

To examine this prediction, I conduct additional analysis and rerun model (2) using the process model in SPSS. As shown below in table 2 Panel A and B, I include an



interaction term of CEO stock options grants and acquirer stock prices. Stock price is a moderating variable (M) between CEO SOG and goodwill. Based on 108 observations, results show that the model is significance at 1% level with $F=4.053$, $P < 0.001$, and R-Square of 31.7%. The interaction is significant at 5% level with a p value =0.02, coefficient of 0.45 and $t=2.26$. R2 change by 1.4% with $F= 5.12$. Results separated into three levels of the acquirer stock prices at the acquisition announcement year showing that stock options grant and goodwill are significant only in level 3 where stock prices is \$ 137 with $P=0.02$ (%5 significance level).

This indicates that CEO holders of stock options grants tend to manipulate the amount of goodwill recognized from the acquisition only if the acquirer stock prices are high.

This confirms my proposition that company stock prices after the announcement of the acquisition tends to be higher in the short term as a result of goodwill recognition which benefits CEO stock options grant holders.

So, the relationship between the amounts recognized as goodwill and CEO stock options grants is not linear but moderated by the acquirer stock prices after the acquisition.



Table 2: Statistics Results for Acquirer Average Stock Price as a Moderator Variable

PANEL A: Regression Model 2

$$GW = \alpha_0 + \alpha_1 SOGRATIO + \alpha_2 AVSTPR.SOG + \alpha_3 SYNERGY + \alpha_4 TRG.BTM + \alpha_5 STOCK + \alpha_6 SIZE + \alpha_7 ACQ.MTB + \alpha_8 AGE + \alpha_9 Gender + \epsilon$$

PANEL B: Estimation of Regression Model, N=108
(F = 4.053, P < 0.001, R = 0.563, R-Square = 0.317)

	model*			
	Coeff	SE	t	P
constant	5.0000	.4878	10.2502	.0000
AVSTPR	.0007	.0010	.7422	.4598
SOGRATIO	.0000	.0000	1.9339	.0561
int_1	.4500	.0000	2.2637	.0259
SYNERGY	.1614	.0492	2.427	.0438
TgtBTM	.0135	.0258	.5225	.6026
STOCK	.1386	.0682	2.0333	.0448
SIZE	-.1858	.0739	-2.5142	.0136
ACQMTB	-.0124	.0154	-.8045	.4231
Age	.0093	.0057	1.6268	.100
Gender	-5.1495	.3328	-15.4720	.0000
tenure	.0035	.0046	.7617	.4481

*int_1= SOGRATIO X AVSTPR

*Level of confidence for all confidence intervals in output is 95%



Conditional Effect of X on Y at Values of the Moderator(s):

AVSTPR	Effect	se	t	P	LLCI	ULCI
0.0000	.0000	.0000	1.9339	.0561	.0000	.0000
35.6853	.0000	.0000	-1.9132	.0588	.0000	.0000
146.2749	.0001	.0000	-2.2815	.0248	.0001	.0000

4.3 The Moderating Effect of CEO Gender on the Relationship Between CEO Stock Options Grants and Goodwill Recognized

I use the SPSS process model analysis (Hayes, 2016) to examine and test for the moderating role of CEO gender on the compensation and goodwill. I test for the interaction term of CEO gender and his/her compensation to examine its effect on the relationship between CEO stock option grants and the amount of goodwill recognized.

TABLE 3: Multiple Regression Results for the Moderating Effect of CEO Gender on the Relationship Between CEO Stock Options Grants and Goodwill Recognized

PANEL A: Regression Model 3
$GW = \alpha_0 + \alpha_1 SOGRATIO + \alpha_2 GNSOG + \alpha_3 SYNERGY + \alpha_4 TRG.BTM$ $+ \alpha_5 STOCK + \alpha_6 SIZE$ $+ \alpha_7 ACQ.MTB + \alpha_8 TENURE + \alpha_9 AGE + \epsilon$

CEO Equity-Based Compensation and Goodwill Recognition
Rasha Mohamed Nasseem Elbolok

PANEL B: Estimation of Regression Model 3				
(N= 108, P <0.001)				
Stock Option Grants				
Variable	Coeff	se	t	p
constant	1.7522	.6479	2.7045	0.0081
Gender	-1.8596	.3233	-5.7517	0.0000
BO, SOG, RATIO	-10.8558	4.2461	-2.5566	0.0121
Int	12.1860	4.4649	2.7293	0.0075
SYNERGY	.1403	.0793	1.7687	0.0801
Tgt BTM	.0220	.0425	.5172	0.6062
STOCK	.0223	.1066	.2089	0.8350
SIZE	-.2381	.1172	-2.0320	0.0449
ACQMTB	.0807	.1801	0.4481	0.6551
tenure	-.0001	.0076	-.0102	0.9919
Age	.0034	.0091	.3711	.7114
F = 4.1213, R ² = 29.82 %, R ² Change= 5.39 %				

* int= SOGRATIO X Gender

PANEL C: The Conditional Effect of X on Y at Values of the Moderator (CEO Gender) for both types of Compensations:

Gender/Results	Stock Option Grants			
	Effect	se	t	p
0	-10.855	4.2461	-2.5566	.0121
1	1.3302	1.4487	.9182	.3608



5. Conclusions and future directions

Results indicate that CEO stock options grants are not directly associated with the amount recognized as goodwill but this relationship is moderated by the acquirer stock prices. CEOs whose compensation package are dependent on stock options grants, tend to manipulate the amount recognized as goodwill after an acquisition only if the acquirer stock prices at the announcement year are high. They tend to overestimate the amount of goodwill to increase the earnings and attract investors. This increases the company's stock prices which consequently increase the value of their stock options grants and the dividends expected to be paid on the stock during the life of the options. So, CEO uses goodwill manipulation to increase company performance and that, in turn, is reflected in the stock price.

Also, results revealed that CEO gender affects or moderates the relationship between CEO compensation and the recognition of goodwill. It indicates that female CEO have lower tendency to manipulate goodwill than male CEO if their compensation package is made of stock options grants. This result is consistent with literature that argues that females are more conservative and hence are less likely to manipulate goodwill than their male counterparts.

This study provides some future recommendations. On



the one hand, the results of this study could provide future research opportunities to explore the associations of various components of equity-based compensation besides stock options grants and options exercised on goodwill recognition in PPA. Also, I suggest further research should be carried out in other countries and pinpoint how the International Accounting Standards differences affect goodwill recognition. Moreover, a matter for future research is to consider a comparison between CEO and CFO compensation structure effect on fair value measurement. Finally, it could be a subject of future research to replicate this study on a larger sample size to further investigate whether CEOs with higher bonus ratio from total compensation recognize more goodwill in the purchase price allocation process or not.

CEO Equity-Based Compensation and Goodwill Recognition
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