Goodwill and Performance

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Abstract

In a context of external growth in constant emergence and in the midst of globalization, mergers and acquisitions are multiplying. As a result, goodwill has taken considerable weight in the groups' balance sheets. As a matter of fact, the concept of goodwill has been for over a decade a subject of debates and discussions trying to define the concept and discuss its treatment in accounting and finance. Beginning with an overview to shed light on the literature review related to goodwill, its accounting treatment and performance measurement, this article will be an attempt to determine the link between the value of goodwill from an accounting point of view and performance measurement based on the results of previous studies. In fact, our study will focus mainly on the M&A initiated in US between 2014 and 2016. Given these points, through our analysis we conclude a positive and strong relationship between goodwill and Residual Economic Income.

1 Introduction

There is a significant increase in the share of intangible assets on the balance sheets of major groups. Furthermore, goodwill has become an increasing significant balance sheet asset between 1990 and 2007 (Li and Sloan 2014). All this find its justification mainly in the following factors: The increasing growth of competition stimulated by the globalization of trade, the advancement of

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information technologies, the Internet, networks, etc. To this end, the increase in cultural and economic intangibles is inevitable.

Indeed, economic models related to value creation are based more on the incorporated assets. It is cristal clear that, given its nature (Residue?) And its components, the determination of goodwill, its accounting and the definition of its link with performance measurement remains a difficult task (Basu and Waymine 2008).

The problem of accounting treatment of goodwill has grown in the last years especially after the adoption of norms SFAS 142 and IFRS3 concerning goodwill's accounting treatment. That's why determining its nature and specifying its accounting treatment clearly puts quantitative impacts on financial statements and effects on stakeholders and capital markets.(Kaiss et al 2017). The existence of intangible assets ,in fact, generates the increase in the value of goodwill when a group of companies occurs. It therefore appears to be: "The part of the enterprise that does not appear in the financial statements." Zanoni 2009.

From another perspective, performance measurement has taken a significative importance for both practitioners and researchers.

Therefore, the objective of this paper is to look for a better understanding of the link between goodwill and performance measurement. More than that, the article attempts to Demonstrate the link between the information required by IFRS to evaluate firm's goodwill and the performance measurement system which brings information about both value creation and realization of value.

2   Related literature

2.1 About performance measurement

Performance is actually seen as a way to measure and make sure that the decision taken by managers are effective and thus assess whether the strategic decisions and plans succeedor failed.

Performance measurement is the process that involves different parameters in order to quantify the efficiency and effectiveness of the actions undertaken. Indeed, performance measurement is a set of performance measures (financial and non-financial measures) Neely et al.

As a matter of fact, according to Neely et al 1995, the performance measurement system can be schematized according to three different levels:

−   The individual performance;

- The set of performance measures the performance measurement system as an entity;
- The link between the performance measurement system and the environment within which it operates.

Another key point is about the tools of performance measurement. Actually, the issue of how to measure performance has long been a subject of debate and discussion among researchers and practitioners around the world. To put it differently, managers and investors are in constant quest to find an economic framework that best summarizes the value and profitability of their business. (a. Al mamun, s. Abu mansor 2011)

2.2 About goodwill
2.2.1 Goodwill's definition
The definitions of the concept of goodwill has been for a long time and until today a very thorny problem : Accountants, writers on accounting, economists, engineers and courts have all tried in order to define and evaluate the goodwill.

According to R. Gynther, goodwill can be analyzed from two ways :

Future excess profit concept: According to this view, goodwill is the present value of the excess of expected future profits over that considered to be a normal return on the total tangible assets. Goodwill is the net present value of those assets difficult to list and value separately.

Residuum concept : Intangibles are the residuum, the balance of the legitimate values attaching to an enterprise as a totality, over the sum of the legitimate values of the various tangible properties taken individually.

Actually, the IFRS 3 defines goodwill as « An asset representing the future economic benefits arising from other acquired assets in a business combination that are not individually identified and separately recognized». In other words, the accounting perspective defines goodwill as "the price paid for the acquisition over the fair value of identifiable net assets".

Starting from 2005 ,companies must switch to a goodwill impairment test. This latter will help to determine with more efficacy any decline in the value of the goodwill compared to the previous accounting treatment (Donnelly and Keys 2002).

IFRS 3 has implemented a goodwill impairment test by eliminating its amortization of goodwill. To do this, a comparison between the recoverable amount and the book value of the CGU's goodwill is crucial. Petersen and Plenborg (2009) reveal that the majority of companies value recoverable amount as value in use and that, therefore, estimates are based on managers' own

assumptions about asset valuation. Besides, the standard abondons the pooling method of accounting for the business combinations and instead opt for the purchased method.

In fact, the method of pooling of interest records assets and liabilities before the acquisition date based on the book value, therefore, there will be no remaining cost compared to the book value, and no new goodwill is recorded. However, the purchase method records assets and liabilities at fair value. Goodwill is recognized on the basis of the difference between the cost and the fair value of the asset

As defined by IFRS 3, the goodwill is defined as the difference between the purchase price and the fair value of identifiable tangible and intangible assets. To this end, internally generated assets must be identified and listed separately on the balance sheet (Hadjiloucas and Winter, 2005).

Goodwill accounting information can be used for measuring management performance in order to meet the goals of the acquisition and protect or preserve shareholders' interests.

O'Hanlon and Peasnell (2002) as well as Ellis (2001) conclude in their studies that a performance measurement linked to value creation is directly connected to goodwill accounting, Through our investigation we provide the link between periodic performance measure and value creation by deriving the concept of residual economic income.

2.2.2 Goodwill's accounting :
The accounting treatment of goodwill has taken different forms over time as a result of ongoing revisions by the FASB and the IASB to address shortfalls each time. To this end, we will briefly present the significant changes in the international accounting treatment of goodwill:

First, in 2001, the FASB introduced SFAS 141 and SFAS 142, which eliminated the "pooling of interest" method and the amortization of recorded goodwill in order to opt for an annual impairment of the goodwill recommended by SFAS 142.

In 2011, the FASB introduced ASU 2011-08: Updated accounting standards to overcome the shortcomings recorded, as the goodwill impairment test generates significant costs.

This guidance has eased the requirements of the first step of the multi-step process for conducting annual impairment tests. "In November 2013, the FASB added a goodwill recognition project to further reduce the cost and complexity of recognizing goodwill. Two months later, in January 2014, the FASB issued ASU No. 2014-02 which simplified the accounting for goodwill for private companies". The expedient amortizes goodwill recognized on the lower of 10 years and

reduces the impairment test to a one-step calculation. The amount of impairment to be recognized is the excess of the book value over the fair value of the entity (reporting unit). This action addressed concerns about the high cost of goodwill recognition for non-listed companies on the stock exchange.

At the March 2014 meeting, four alternatives were considered for the recognition of goodwill: direct write-off, a simplified impairment model, and two options involving amortization according to He Wen, Stephan Moehrle 2016.

Schulze (2005) analyzes the information content of goodwill impairment under SFAS 142. Actually, impairment maybe due to several reasons not related to a deteriorating economy performance. Besides, the information which results from impairment testing may have undesirable effects on management decisions.

Besides, O'hanlon and Peaswell (2002) establish the missing link between residual income and value creation which represents a joint measure for value creation EVA (Excess Value Created).

3 Data and methodology

In our analysis we stand in the perspective of shareholders. Performance measures based on accounting information play a crucial role in accounting in general. In theory and in practice, residual income is considered an indicator of value creation from the point of view of shareholders Schulze (2005).

4 Model

Through our literature review, we have managed to deduce the following equation allowing (Schultze 2005) to delist the value of the goodwill and the measure of the performance represented in our case by the Residual Economic Income REI:

$$REI = RI_t + \Delta GW_t - r*GW_{t-1}$$

Through this equation we will try to proceed with a regression that combines the value of goodwill and the measure of performance.

5 Sample and variable selection

Concerning the selected variables and according to the equation mentioned below, we have :

- GW: Refers to goodwill

- REI: Refers to Residual Economic Income which is "the return on the firm value at the beginning of the period". It represents the best indicator for quantifying performance as it relates to newly created value and potential differences between forecasts and actual figures. (Schultze 2005).
- Rt : Refers to the Residual income specific to date t.
- r: Refers to the cost of capital

For our empirical analysis, we identify the M & A transactions for which the amount of goodwill is significant. In collecting our data, we focus on transactions made between 2014 and 2016 by US and US acquirers, mainly for the following reasons. Firstly, these are the major M & A markets. Secondly, in the United States, the date-of-agreement model was in place until in 2007 the revised SFAS 141 (2007) was published.

Descriptive statistics of our sample of 139 acquisitions are as follows:

Table 1: Descriptive statistics of our sample

Goodwill		*RI*		*REI*	
Average Standard-	3928965241	Average	587609169	Average Standard-	2156236737
error	661173007,7	Standard-error	201848555,3	error	498230347,7
Median	596316000	Median	11672000	Median	178313027,9
Mean Std	18552800000	Mean	274700000	Mean Std	9047267542
deviation	7795114798	Std deviation	2379759370	deviation	5874049169
Minimum	269000	Minimum	-3074000000	Minimum	-7642895618
Maximum	34087000000	Maximum	12747000000	Maximum	38034000000
Sum	5,46126E+11	Sum	81677674489	Sum	2,99717E+11
Number	139	Number	139	Number	139

6 Results

It remains judicious to present the result of the correlation between the chosen variables:

Indeed, the analysis of the correlation shows a very significant and positive relationship of 69% between goodwill and the "Residual Economic Income" as presented in the following table:

Table 2: Correlations between variables

	Goodwill	*CashFlow*	*RI*	*REI*
Goodwill	1			
CashFlow	0,4329759	1		
RI	0,35642512	0,53759651	1	
REI	0,69622658	0,42555994	0,50262547	1

The results of our study can be summarized as follows :

The summary of the models below illustrates a coefficient of R significant Indeed, the model allows explanatory variables (Goodwill) to explain 55% of Residual Income Income.

Table 3: Detailed report about regression statistics

Regression statistics	
Multiple Coefficient of determination	0,745371818
Coefficient of determination R-square	0,555579147
Coefficient of determination R-square adjusted	0,549043546
Standard-error	3944617354
Observations	139

The t-test is used to illustrate that goodwill is the most significant variable in the equation with a coefficient of 9,7 that is well above 2 as described in the table below:

Table 4: distribution of probabilities between variables

	Coefficients	*Standard-error*	*Test t*	*Probability*
Constant	-17647810,2	375728024,8	-0,04696964	0,962606326
Goodwill	0,448129766	0,046104718	9,719824523	2,79147E-17
RI	0,703185543	0,151020129	4,656237195	7,56926E-06

7 Discussion

The conducted study led us to the results listed as follows :

✓ Performance measures based on goodwill calculated on the basis of accounting information play an important role in both financial and managerial accounting;

✓ It exists a strong positive relation between the value of residual income and the value of goodwill

✓ As REI reflects the actual value creation of a particular division, we conclude that the use of this performance measure on the level of cash generating units leads to a performance measurement system which is congruent with the goals of shareholders. Thus, if divisional managers are evaluated on the basis of REI.

✓ We conclude that REI as an ideal performance measure can be calculated from the financial accounting information originated by goodwill accounting.

8   Conclusion

Value-based performance measurement metrics essentially serve two functions: first, they are implemented in compensation systems to incentivize managers to make optimal decisions for shareholders. Second, these performance measures must provide investors with information to assist them in making decisions. As a result, residual income is significant in measuring performance.

Through this article, we have tried to highlight the link between goodwill and performance measurement by translating this relationship into our sample of acquisition transactions between 2014 and 2016 in the United States. Our study showed a strong and significant relationship between the goodwill value calculated through the accounting information (Goodwill represents the difference between the value paid by the company at the acquisition date and the fair value of the identifiable net assets according to international accounting standards as explained below) and the measure of performance represented in our case by residual economic income.

In addition, With positivist epistemological position our research aims to understand, in the further research, how goodwill value fluctuates before and after the acquisition date and analyze the performance post-acquisition.

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