

**Determinants of disclosure of intangible assets for the  
Commercial banking sector in Egypt**

**Bassant Badr El Din El Sharawy**

**Cairo University- Faculty of Commerce- Accounting  
Department**

**ABSTRACT:**

This study examined the determinant of Commercial Banking Sector Intangible Asset Disclosure in Egypt. For the period 2010-2019 a sample of (17) selected banks were used. The thesis was based on the concept of both Ex-post facto and quantitative studies and used secondary data for interpretation. The data gathered were analyzed using descriptive statistics, matrix of correlation and regression of ordinary least square. The result indicated that there is a substantial and negative interaction between bank size and Intangible Asset Disclosure which was statistically significant at 5 per cent significant level while a favorable and significant relationship was reported against Bank Age and Intangible Asset Disclosure which was statistically significant at 1 per cent significance level. The finding shows that all the independent variables of our sampled banks over the 10-year period accounted for 71 percent of the system variation in Intangible Asset Disclosure, while about 29 percent of the total variations were not accounted for, thus captured by the stochastic

error term. The study therefore recommends, among others, that a reduction in the size of banks should be encouraged as it enhances the disclosure of intangible assets among banks in Egypt while encouraging the existence of old generation banks (Al Ahly Bank-Bank Misr) as it helps to comply with disclosure policy.

**KEYWORDS:** profitability, firm size, intangible assets disclosure, leverage and banking industry.

## 1 Introduction

The purpose of writing an annual report for a bank is to divulge the results of the bank. In fact, the annual report provides details on the operating results, financial situation and cash flows of a company (Krstic & Dorđevic; 2010). However, in order to achieve this purpose adequately, the financial report must provide sufficient detail relating to the various elements or components (capital and recurrent) of the final accounts. To determine the financial performance and the firm's position, assets and liabilities are reported at their net book values when preparing these annual reports. Nevertheless, the monitoring and disclosure of intangible assets is a vital aspect of this financial reporting which is unduly ignored in the financial position statement. In fact, it has been found that the market value of a company is usually higher than its book value, and the difference can be due to the non-disclosure of intangible assets in the

financial position of the company (Bukhet, Gormsene & Mouritsen; 2005). In other words, the magnitude of the difference in banks' market values and book values is an indication of the impact of intangibles on those banks.

Intangible asset disclosure has been a problem in Egypt's banking sector and this has resulted in inconsistency in measurement, valuation and financial reporting on a wide range of intangible assets. Furthermore, the prevailing traditional accounting model does not guarantee a thorough understanding of accounting reporting for 21st-century accounting research and does not provide empirical insights into the voluntary disclosure of intangible assets. The challenge of inconsistency also arises in the common framework of measurement, valuation and financial reporting on a wide range of intangible assets, and the inability of the traditional accounting standard or even the late Egyptian accounting standard to address reliability, separability, Measurement, valuation and specific financial reporting concerns relating to the declaration of intangible assets have not made itself transparent to clients and financial reporting consumers and, as a result, have contributed to the introduction of formal accounting principles. As such, this weakness has led to the development of standards (IAS 38) capturing how intangible assets can be measured and reported in the financial position statement. Moreover, the International Accounting Standard No. 38 (IAS 38) and even the late Egyptian Accounting Standard

Statement provide little or no guidance on the financial reporting of intangible assets, posing a serious problem for decision-makers. Nevertheless, the International Accounting Standards Board (IASB) (2000) has instructed companies to report, at least on a voluntary basis, on their stock of intangible assets in order to supplement the financial reports and also provide explanations on unrecognized assets. It indicates that these details would be conveyed above mandatory criteria (Abdul Halim & Baxter; 2010), which should only be freely shared.

While studies on similar topics have been carried out by some academics, the researcher still noticed some discrepancy in literature. These studies include: Ribeiro, Gomes and Duenas, (2015), Alexander, Philip, Belgium and Mai Dao, (2009), Ancuta, Moisescu and Varlanuta, (2017 ) analyzed the degree to which accounting treatment of intangible assets affects the importance of financial details for Romanian pharmaceutical companies listed on the Bucharest Stock Exchange, and found that accounting treatment of intangible assets. The few studies that have been conducted in Egypt have been performed on sectors other than bank. It is on this that we agreed to review banking sector to close the gap in literature by looking at the determinant of disclosure of intangible assets in banking sector in Egypt. Against this background , this study examined the determinants of banks' voluntary disclosure of intangible assets in Egypt and the extent to which various factors affect such

voluntary disclosure in Egyptian banks, as well as the critical factors for the provision of useful information that allow users of accounting information to evaluate the available options. Hence, understanding the accounting reporting practices of developing economies such as Egypt as they relate to the disclosure of intangible assets is essential.

## **2 Theoretical framework and development of research hypotheses:**

### **2.1 Stakeholders Theory**

Edward Freeman R propounded the stakeholder theory. in 1984. The stakeholder theory argues that the disclosure of corporate information to stakeholders relating to the most important activities has an organizational responsibility, being the principal source of disclosure through financial statements Maria, Ana & María, (2011). In this regard, Rodrigues (2006) considers that, due to the complexity of the economic reality and the increasing ownership by groups of intangible assets, these statements continuously deviate from the purpose of providing the picture of the business reality to the external users.

Recently, Freeman (2002 ) argued in its updated stakeholder theory that organizations need to go beyond maximizing shareholder wealth to address the interests of its stakeholder groups and individuals who may affect or be affected by the

purpose and existence of the organization. Such stakeholders are known as possible winners or bearers of any danger the company might be subjected to (Post et al . , 2002) and Dubey, Gunasekaran and Papadopoulos (2017) and Dubey, Gunasekaran, Papadopoulos, Childe, Shibin and Wamba (2017). In line with that, Freeman concluded that beneficiaries should be changed from stockholders to stakeholders, and that effective decision-making authority should be given on a par with the executives of the firm (Stieb, 2009). The author further argued that "each of these stakeholder groups has the right not to be treated as a means for some purpose and must therefore participate in determining the company's future direction in which they have an interest" (Freeman, 2002).

Several stakeholders' quality analysis in business publications confirms the significance of this hypothesis within our research (Guthrie et al., 2006). The philosophy of stakeholders suggests that all stakeholders are entitled to knowledge on how corporate practices have influenced them, even though they chose not to do it (Deegan, 2000). The various pressure groups considered to have an stake in influencing some elements of an organization can be conveyed easily by the annual report (Guthrie, Perry & Riccert, 2004). Companies will also voluntarily disclose information such as human capital to meet stakeholders' demands that have the power to control the organization's required resources. Stakeholders should also be seen not only as existing

ones, but as having legitimate impacts on the companies. The partnership can be seen as a friendship of two kinds (Olajide, Olugbenga, Lateef & Ajayi, 2018). What stakeholder the company needs can vary. Some will actively seek to influence what the organization is doing and others might be concerned with limiting the effects of the activities of the organization on themselves. Stakeholder partnerships can also vary; future relationships may include disputes, sponsorship, daily dialogue, and joint partnership.

## 2.2 Leverage and Intangible Assets Disclosure

Leverage reflects the share of fixed-interest capital within a bank's capital structure. Enterprise leverage suggests using debt to finance the company's activities. Proponents of the agency hypothesis claim that a high-leverage organization is forced to reveal more information to reduce service expenses, resulting from the possible scale of the transition of capital from bond holders to owners in accordance with signalling and stakeholder hypotheses (Oliveira, Rodrigues, & Craig. 2006). In comparison, leverage, in many comparative analyzes as a systemic feature, has appeared with conflicting findings in terms of its impact on transparency activities within businesses. Black, Lee and Tower (2007) and Craig and Olivera, Rodrigues and. (2006) accurately noted that, in several surveys in various countries and industries, no consistent association between indebtedness and release of information was

found. In addition, Roberts and Gray (1995), Ferguson, Lam and Lee (2002) found a positive relationship. Chow and Wong-Boren (1987), Wallace, Naser and Mora (1994), and Wallace and Naser (1995) did not even find any connection between leverage and voluntary disclosure of intangible assets. Meanwhile, in its annual reports, Sujan and Abeysekera (2007) found a favorable association between a firm's low-leverage financial arrangement and further disclosures. Leverage has a connection with firm success which is negative and statistically important. For the highly oriented firms, the relationship between leverage and output of the company is statistically important at a point of importance of 10 per cent. This observation is in tandem with Gleason, Mathur and Singh (2000), Agarwal and Elston (2001), Abor (2007), and Chen Firth, and Zhang (2008), respectively. That demonstrates that leveraging has a negative effect on firm results. A rise in the leverage ratio (decrease) would minimize (increase) company output by 15.8 per cent. As the relationship is statistically significant, it is consistent with the expectation on traditional capital structure theory. On the contrary, in our analysis, macroeconomic variables show a positive effect on Ogebe, Ogebe, & Kemi (2013) firm results. There are some inconsistencies, however, that existed in the literature, which is why the current study does not intend to propose any signs, rather we hypothesize that there is a significant relationship between leverage and disclosure of intangible assets (Hypothesis 1).

## 2.3 Firm size and Intangible Asset Disclosure

Perhaps firm size is the most consistent corporate-specific characteristic that has been found to be associated with intangible asset level (Kang & Gray, 2008). In previous studies, the relationship between firm size and voluntary disclosure has been supported using various company size proxies including sales revenue and market capitalization (Hope, 2003). Furthermore, various voluntary disclosure measures, including social responsibilities, the environment, employees, ethical issues, corporate governance and intellectual capital, have been examined and found to be positively linked to the size of the firm (García-Meca, Parra, Larran & Martinez, 2005, 2005; Kent & Chan, 2004; Cormier & Gordon, 2001). However, it is important to note that there is no suggestion that the corporation's size causes differing levels of voluntary disclosure per se; a large corporation is more likely to have underlying reasons for increased disclosure (Cooke, 1989). Larger companies enjoy economies of scale and face less risk of bankruptcy. Many companies, though, can get too big to suffer large systemic and operating costs. Valentin (2012 ) claimed the size of the company could have a positive effect on financial performance as the larger companies can use this advantage to gain some financial benefits in business relationships. Pouraghajan and Bagheri (2012) also found a significant positive relationship between size of the firm and measures of financial performance. Nevertheless,

given the contradictory theoretical argument, this paper does not predict any sign of bank size, but suggests a significant relationship between bank size and disclosure of intangible assets (Hypothesis 2).

#### 2.4 Firm Profitability and Intangible Assets Disclosure

Corrado, Sichel, and Hulten (2006) linked the investments of intangible assets to good corporate performance, proxied by profit. The findings in their study suggested that disclosure of intangible assets was related positively to corporate performance. Empirical evidence regarding firm profitability and voluntary disclosure of intangible assets, however, is mixed (Oliveira et al. 2006; Patell 1976; Penman 1980; Lev & Penman 1990). According to Klock and Megna (2000), using the contact sector as a data source, the Tobin's Q average for the sector was more than ten (10), indicating that the stock valuation is around 10 times greater than the book value. According to the same study, the Tobin's Q average for conventional industries is no greater than one. Profitability was found to be strongly and substantially correlated with voluntary declaration of intangible properties, including the components of human property, in a report undertaken by García-Meca, Parra, Larran and Martinez, (2005). This positive and significant relationship may be due to management's desire to raise the management package and bonus as well as to justify profitability levels; or to signal or disclose

information on intangible assets as value drivers, or to show the market the source of their profits, in line with the signaling theory. Nevertheless, the observations of Skinner (1994) and Freeman (1982) did not, by comparison, suggest any clear and definitive connection. Similar results were also discovered by Baker and Gandi (2007); they confirmed that the higher the return on equity of the firm, the greater the retained earnings. Nevertheless, given the contradictory theoretical argument, this paper does not predict any sign of profitability for the bank, but suggests that there is a significant relationship between bank profitability and disclosure of intangible assets (Hypothesis 3).

## 2.5 Age of bank and Intangible Assets Disclosure

Bank age is used to clarify cooperative divulgation activities linked to intangible properties. Empirical data, however, shows that research on the relationship between age of business and intangible human capital assets are not definitive. Meanwhile, Owusu-Ansah (1998) and White, Lee and Tower (2007) found a strong positive relationship between company age and the practices of intangible assets. This has been argued whether businesses with more years of life should have gained more expertise and possessed more capital. Moreover, such companies would have had more time to establish their customers and networks of suppliers, and to contribute more to communities, as well as to have more opportunities, alliances, research centers

and universal institutions to benefit from these initiatives. Glaum and Street (2003) and Akhtaruddin (2005) found the relationship negative but insignificant. Li, Pike, and Haniffa (2008 ) also reported a negative relevant relation. However, finding by Kang & Gray (2006) on the relationship between bank age and voluntary declaration of intangible assets is optimistic but negligible. In fact, based on the above discussion and the findings of previous studies , this study does not want to predict any signs for bank age, instead we assume that there is a significant relationship between bank age and disclosure of intangible assets (Hypothesis 4).

### 3 METHODOLOGY

#### 3.1 Research Design

This research focused on the determinant of disclosure of intangible assets in the Commercial Banking sector in Egypt. This investigation relied heavily on historical data. Essentially, data were collected from the annual reports of selected banks in Egypt having followed the research framework Expost-facto. The use of Ex-post-facto research design was justified by the use of secondary data, which is also seen as empirical analysis of past events from 2010-2019 of 17 selected banks quoted as 2019 on the Egyptian Stock Exchange floor and have consistently submitted their annual reports from 2010 to 2019 to the Egyptian Stock Exchange.

### 3.2 Model Specification

The following model (Regression model) which examines the relationship between a dependent variable and two or more repressors or independent variables was adopted for the respective variables and hypotheses in order to test for the relevance of the hypotheses regarding the determinant of the disclosure of intangible assets in the Commercial Banking sector in Egypt.

$$Y = \beta_0 + \beta_1 \text{FSIZE} + \beta_2 \text{BAGE} + \beta_3 \text{LEVGE} + \beta_4 \text{PROF} + \mu \quad (1)$$

$\beta_0$ , are the intercepts;  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  are the coefficients of the explanatory variables and also the coefficients of the moderating variables and  $\mu$  are the error or disturbance term that absorbs the influence of omitted variables in the proxies used.

Where

Y = Intangible Asset Disclosure (INTAD) as dependent variables while independent variables are as follows:

FSIZE = Firm Size(X1)

BAGE= Banks Age(X2)

LEVGE = Leverage(X3)

PROF = Profitability measured using Profit Margin(X4).

#### 4 Data Analysis And Interpretation

This study examines the reasons why Egypt 's banks disclose any form of intangible assets in their annual report. The population for this study is made up of only 17 selected banks in Egypt with annual financial reports for the period 2010 to 2019. Over ten years we selected the sample of 17 banks in Egypt. We conducted descriptive statistics, correlation matrix and firmly observed binary regressions in identifying the specific characteristics and exogenous factors of the possible firm that would influence the firm 's decision to disclose intangible assets in the financial reports. The variable for this study includes a dummy dependent variable that would otherwise take the value of "1" for banks disclosing intangible assets in their financial report (INTAD) and "0".

The autonomous variables were bank size (FSIZE), bank age (BAGE) leverage (LEVGE) and profitability (PROF). This research examined and interpreted data gathered from seven (17) banks selected in Egypt. The research followed the ordinary least square ( OLS) approach in evaluating the data to classify the potential factors that decide the disclosure of the intangible assets. The study conducted some preliminary analyzes, like descriptive statistics and matrix of correlation. The following is the descriptive statistics for a ten year period from Seventeen sampled banks in Egypt.

#### 4.1 Descriptive Analysis

The descriptive statistics for the dependent and independent variables used in this study were presented in table 1 below:

Table 1. Summary of descriptive statistics for the variables employed in this study

	<i>INTAD</i>	<i>LEVGE</i>	<i>FSIZE</i>	<i>BAGE</i>	<i>PROF</i>
<i>Mean</i>	<i>0.59</i>	<i>0.23</i>	<i>0.37</i>	<i>23.0</i>	<i>0.51</i>
<i>Median</i>	<i>1.00</i>	<i>0.17</i>	<i>0.34</i>	<i>17.0</i>	<i>0.41</i>
<i>Maximum</i>	<i>1.00</i>	<i>1.49</i>	<i>0.79</i>	<i>57.0</i>	<i>0.83</i>
<i>Minimum</i>	<i>0.00</i>	<i>0.15</i>	<i>0.19</i>	<i>11.0</i>	<i>0.24</i>
<i>Std. Dev.</i>	<i>0.46</i>	<i>0.24</i>	<i>0.14</i>	<i>14.2</i>	<i>0.19</i>
<i>Skewness -</i>	<i>0.27</i>	<i>5.51</i>	<i>0.88</i>	<i>1.19</i>	<i>0.31</i>
<i>Kurtosis</i>	<i>1.21</i>	<i>2.87</i>	<i>4.65</i>	<i>3.26</i>	<i>1.61</i>
<i>Jarque-Bera</i>	<i>5.64</i>	<i>11.04</i>	<i>12.06</i>	<i>11.80</i>	<i>3.24</i>
<i>Probability</i>	<i>0.04**</i>	<i>0.00*</i>	<i>0.00*</i>	<i>0.00*</i>	<i>0.16</i>
<i>Sum</i>	<i>20.0</i>	<i>6.95</i>	<i>13.6</i>	<i>63.6</i>	<i>16.4</i>
<i>Sum Sq. Dev.</i>	<i>7.56</i>	<i>1.59</i>	<i>0.54</i>	<i>44.7</i>	<i>1.52</i>

Note: \*1% level of significance, \*\*5% level of significance

The concise statistics table 1 above tests the distribution of normality of all variables by showing their mean, minimum, maximum values and Jarque-Bera (JB) numbers. From the table above, the primary variable is the declaration of intangible assets while independent variables are company scale, bank age, equity and productivity. As seen in Table 1 above, the total allocation of intangible assets was 59 percent, and the standard deviation was

49 percent, while the maximum and minimum value are 1/0 percent, respectively, since it is a binary number that means zero and one. This is to say that 59 per cent of its total assets are the mean and average disclosure of intangible assets. The result gave some insight into the nature of the banks selected under study. Firstly, the large difference between the maximum and minimum values of the determinants of the disclosure of intangible assets shows that the sampled banks differ greatly; this has also been reaffirmed by the standard deviation value indicating that the sampled banks are not dominated by banks whose disclosure of intangible assets is below average. This reveals that in their annual report, half of the banks or 59 per cent of the sampled banks declare their intangible assets. The variance in the maximum and minimum value of selected banks' intangible asset declaration showed that our sampled banks are homogeneous, and the selected calculation techniques do not take heteroscedasticity problem into consideration. Hence, this justifies the use of ordinary least square regression techniques (OLS).

Ultimately, in Table 1, the Jarque-Bera (JB) checking the normality or presence of outliers or extreme value of variables reveals that the firm scale, bank age and leverage are normally distributed at a level of 1 percent, while the measurement of intangible assets is normally distributed at a level of 5 percent, except for the productivity normally distributed at a level above 10 percent. It means that no variables of outlier are likely to skew

the inference even though there are, and are thus accurate for generalization drawing. Overall the descriptive statistics showed that there is no sample collection bias or outlier in the results that would hinder this study's generalization. It often supports the use of common least square calculation methods.

#### 4.2 Correlation Matrix

The research used the Pearson correlation coefficients (correlation matrix) when analyzing the relationship between the variables, and the results are described in table 2 below. In order to assess the existence of the interaction, i.e. positive or negative correlation, and the importance of the relationship between contingent variable and independent variables, Pearson's correlation matrix was extended to test the degree of connection between intangible asset disclosure and its determinants in Egypt. The results of the matrix for correlation are given in Table 2.

Table 2. Pearson correlation matrix

	<b>INTAD</b>	<b>FSIZE</b>	<b>BAGE</b>	<b>LEVGE</b>	<b>PROF</b>
<b>INTAD</b>	1.00				
<b>FSIZE</b>	-0.36	1.00			
<b>BAGE</b>	0.59	0.29	1.00		
<b>LEVGE</b>	0.10	0.59	0.36	1.00	
<b>PROF</b>	-0.25	0.51	0.49	0.24	1.00

The purpose of planning this matrix of correlation is checking the potential degree of multi-co linearity between the independent

variables. Result from the aforementioned table showed that the allocation of intangible assets is negatively associated with company size and competitiveness while being positively correlated with bank age and leverage. The results from the matrix table of correlations revealed that a moderate negative relationship exists between the disclosure of intangible assets and their determinant, calculated by company size and productivity, whereas a positive association exists between the disclosure of intangible assets and bank era. A close glance at the significance of the effects of the Pearson correlation coefficient showed that all the factors are closely related to the firm's decision to list intangible assets in its annual financial reports. This was also discovered that all the determinants of the declaration of intangible properties have a clear and constructive interaction with one another.

The study noticed from the correlation table, when checking for multi-collinearity, that no two explanatory variables were perfectly correlated. This suggests that the model used for the study lacks the multi-collinearity problem. It often supports the use of the common least square.

### 4.3 Regression Results

#### 4.4 Test of Hypothesis and Discussion of Findings

To examine the relationship between the dependent variable (intangible asset disclosure: INTAD) and the independent variables (FSIZE, BAGE, LEVGE and PROF) and to test our formulated hypothesis, we used an ordinary least square regression analysis, since the data had both time series (2010-2019) and longitudinal properties (17 selected banks). Our review is laid out below in Table 3:

*Table 3. Summary of binary logistic regression analysis*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>C</b>	0.81	0.18	4.51	0.00
<b>FSIZE</b>	-1.23	0.58	-2.11	0.04
<b>BAGE</b>	0.03	0.00	7.36	0.00
<b>LEVGE</b>	0.26	0.29	0.83	0.41
<b>PROF</b>	-1.29	0.32	-4.02	0.00
R-squared 0.74 Adjusted R-squared 0.72 S.E. of regression 0.29 Sum squared resid 2.36 Log likelihood -2.50 F-statistic 18.73 Prob(F-statistic) 0.00 Durbin-Watson stat 1.69				

Table 3 above shows selected banks' ordinary, least square, regression analysis in Egypt. From the data above the McFadden R-squared value from the data of the conditional logistic regression reveals that all independent variables will collectively estimate about less than one per cent of the outcome of the dependent variable. The McFadden R-squared 's strong success shows that intangible reporting activities of selected banks in Egypt can be estimated by the particular features of the company that are included in the model. This means that most banks in Egypt that may disclose intangible assets in their annual report do so and they consider most of their specific features. When seen in Table 3 above, the 18.73 F-statistics and their 0.000 P-value shows that all of our regression models are reasonably relevant and well-specified . F-statistics for the model revealed that the overall model is statistically meaningful and valid in explaining the dependent variable result. The result also showed that the R-squared value of 0.74, which is equal to 74%, suggests that the independent variables explained approximately 74% of the systemic variance in the selected banks' intangible asset disclosure strategy over the five (5) years measured, while the remaining 26% were explained beyond the unidentified variables collected by the selected bank. The value of R-squared, which is the decision coefficient, stood at 74 percent , which means that the model explained 74 percent of the statistical differences in actual dependent variables, while 29 percent remained essentially

unknown. We also observed an improved R-squared value of 0.72. This suggests that all independent variables jointly explain about 72 percent of the system variation in our sampled banks' policy of disclosure of intangible assets over the 5-year period, while about 28 percent of the total variations were uncounted for, thus captured by the stochastic error term. In fact, the Durbin Watson figures of 1.69 shows that the model is well distributed and that there was no problem with self or auto association, and the error is independent of each other.

In addition to the above, the results of binary logistic regression of measurable banks as shown in Table 3 are given and their different findings from each explanatory variable are translated as follows:

H1: Leverage has no significant effect on disclosure of intangible asset.

It can be observed that the leverage has a positive coefficient value of 0.26 which was insignificant for statistics. Leverage was found to be statistically insignificant and positively linked to the likelihood that banks will disclose intangible assets for stakeholders. This suggests a increase in Egypt banks' debt reduces their risk of reporting intangible assets. Thus, firms with higher leverage have more incentive to voluntarily disclose information, thus hoping to reduce the cost of the agency. It can be observed that the leverage has a positive coefficient value of

0.26 which was insignificant for statistics. Leverage was found to be statistically insignificant and positively linked to the likelihood that banks will disclose intangible assets for stakeholders. This suggests a increase in Egypt banks' debt reduces their risk of reporting intangible assets. Thus, firms with higher leverage have more incentive to voluntarily disclose information, thus hoping to reduce the cost of the agency. That is, the level of debt will not be directly related to the extent of declaration of Intangible Assets; instead, it is the amount of equity in the capital framework that is favorably correlated with the voluntary disclosure. In other words, there could be a favorable correlation between the power and the voluntary release of intangible assets. Second, the correlation between leverage and disclosure of intangible assets may be affected by the underlying structural role of the bond sector in underdeveloped economies such as Egypt. This observation may be true for Egyptian creditors, since most long-term and short-term creditors in Egypt are not interested in focusing on financial assets, but rather how their debt is serviced. This result led to the rejection of alternative hypothesis, which suggests that the disclosure and leverage of intangible assets by the firm should be significantly related. So we accept our three null hypothesis and assume that debt has no major impact on the accounting of intangible assets.

H2: Firm size has no significant effect on intangible asset disclosure.

Based on the t-statistical values of the declaration of intangible assets and their correlation, firm scale seems to be consistent with apriori assumptions which were statistically important in justifying the decision by banks to reveal intangible assets to stakeholders in financial results. The analysis resulting from the impact of firm size on the disclosure of selected banks' intangible assets showed a coefficient value of -1.24, a t-value of -2.11 and a P-value of 0.04. The coefficient value of -1,24 indicates that bank size has a negative effect on the divulgation of chosen banks' intangible assets. It suggests that a decrease in the overall log of bank assets contributes to an rise of about 1.2 trillion in the release of selected banks' intangible assets. By extension, this implies that an rise in banks' size would result in its estimation of intangible assets falling to around 1.2 trillion. That means small banks are likely to reveal more subjective information on a voluntary basis than big banks. Lesser banks also allow their clients to share more detail in annual reports. We argued that small banks could allow their clients to share more details because they want to protect their integrity, improve the framework of their assets and ensure that they maintain their clients. The t-value of -2.116 shows that bank size greatly impacts their decision to report their intangible assets. The probability value of 0.04 indicates that the impact of bank / firm size on the

declaration of intangible assets of selected 7 banks in Egypt is statistically important at a degree of significance of 5 per cent. The result p-value reaffirms the results of the t-test statistics. Based on the substantial findings obtained from the results of the study, this finding denies the hypothesis (H1), which notes that firm size has no significant impact on the disclosure of intangible assets by banks and instead supports the alternative hypothesis and suggests that firm size has a significant impact on the disclosure of intangible assets by banks.

H3: There is no significant effect between profitability and disclosure of intangible asset.

The profitability of the Bank (PROF) also tends to be statistically significant and negatively associated with the risk that banks would declare intangible assets in financial reports, based on t-statistical values of intangible asset disclosure and its correlation. This indicates that a decline in the level of profitability of banks results in an increase in the disclosure of selected banks' intangible assets to 1.29 percent. This implies that an increase in the banks' profit level will result in a decrease in intangible assets of around 1.29 per cent. There is evidence of a strong correlation between higher intrinsic qualities and higher productivity. The higher the profit, the higher the company's voluntary disclosure of intangible assets and this attracts potential investors to their business. This ensures that if Egypt's banks' productivity

improves they are likely to expose intangible assets. Furthermore, the voluntary sale of intangible assets shows a firm's true benefit and increases the firm's competitiveness while raising the equity capital investment in the market, enticing more shareholders to invest. The t-value of -4.02 indicates that competitiveness of the banks has a significant impact on the declaration of chosen banks' intangible assets. The probability value of 0.00 shows that the impact of competitiveness on the declaration of selected bank's intangible assets in Egypt is statistically important at 1 percent sense level. The result p-value reaffirms the results of the t-test statistics. This finding contradicts the Hypothesis (H4), which notes that the admission and productivity of intangible assets by the company has no significant impact and instead suggests that productivity has a significant effect on the admission of intangible assets, and was statistically important at a point of 1 percent.

H4: Bank age has no significant effect on intangible asset disclosure.

From its inception this concerns the age of the bank. Bank Age (BAGE) has also been shown to be favourably linked to the disclosure of intangible assets, and their association was statistically important in affecting the decision of banks to report intangible assets. The study test revealed a coefficient value of 0.03, a t-value of 7.36 and a P-value of 0.00 respectively. The

coefficient value of 0.035 shows that bank age has a strong and beneficial impact on banks' disclosure of intangible assets, meaning that the older the banks, the greater their disclosure policy execution. The meaning of the slope coefficients, which is not consistent with apriori standards, indicates that keeping other factors steady, older banks are less likely than young companies to report intangible assets to stakeholders. It may be so because most recently developed banks are more willing than old companies to follow best reporting practices and standards. It is suggested that "older" and more established companies are more likely to have a value chain creating intangible assets as part of their operational activities, as these companies have had more time to establish their customer and supplier networks, contribute to communities and create opportunities, such as alliances with research centers and universities, to benefit from these undertakings. As such, they will participate in cooperative divulgation activities to educate various stakeholders about their intangible properties. Another argument that supports a positive relationship between the age of the company and the level of voluntary disclosure of intangible assets is based on the premise that established banks are more likely to consider expanding their operations or offering opportunities for investment on the global market. This is, these banks will perhaps view financial markets as a means to collect money, and therefore participate in higher volunteer transparency activities. The t-value of 7.36 shows this

bank age is statistically important, whereas the likelihood value of 0.00 suggests that the impact is statistically significant at 1 percent of importance. This finding contradicts hypothesis two and thus suggests that bank age has a substantial influence on the accounting of intangible assets, which was statistically important at a level of significance of 1 per cent.

## 5 Conclusion

This research examined potential factors that could affect the declaration of intangible assets by banks in Egypt. In this study, the 17 selected banks were drawn from all of the quoted Egyptian commercial banks that maintained annual financial report from 2010 to 2019. In determining the basic characteristics and exogenous factors of the future business that would affect the decision of Egyptian bank to report some type of Intangible Assets to its stakeholders; the researcher performed concise data, correlation and clearly measurable differential logistic regressions. Unlike most previous research that find banks scale, competitive banks, older banks, and leverage as a major determinant of the firm's decision to report intangible assets, a majority of our variables have statistically relevant consequences in this analysis by use Egyptian data except for leverage. Although most variables maintained their apriori expectations but were not statistically significant in influencing the decision of the selected bank to disclose intangible assets in its annual reports. In

general , the findings reveal that the risk of most Egyptian banks reporting intangible assets in their financial accounts is closely linked to firm size and bank status. It is important to note from the report that stakeholders involved in disclosure of intangible assets pay more attention to particular characteristics of the business except leverage which does not have any possible impact on the disclosure practices of intangible assets by banks. This is very important because banks in Egypt which disclose intangible assets can not attribute this to their leverage status.

## 6 Recommendations

And we made the recommendations below.

1. This increase in firm size should be welcomed, as it enhances the disclosure of intangible assets by Egyptian banks
2. Less trust should be put on Egypt banks to improve the degree of competitiveness, as it limits the willingness of banks to report their intangible assets.
3. The banks' age should be taken into account when forcing them to report their intangible assets as older banks (Al Ahly Bank-Bank Misr) prefer to follow such a strategy better than newly formed banks.

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