

# The Impact of Intellectual Capital on SWOT Analysis among Jordanian Banking Industry "Empirical Study"

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## Abstract

*The competitive financial market urged banking industry to focus on linking the theme of intellectual capital dimensions with the SWOT analysis in to provide a continuum for the improvement process and performance to meet the future challenges, targets and reaching the set standards. The study aims to explore how intellectual capital components affect the SWOT analysis in the Jordanian banking industry. The population of this study consisted of all national institutional banks working in the Jordanian banking industry, meanwhile, the unit of analysis were Branch managers, department managers, supervisors or team leaders working in the Jordanian banking industry. The statistical evidence from the study showed that there is an existence relationship effect between the intellectual capital and SWOT analysis in the Jordanian banking industry. In addition, the study showed that  $\beta$  value for intellectual capital components ( $\beta = 0.609$ ,  $p = 0.000$ ) is significant at ( $P \leq 0.01$ ).*

**Keywords:** Intellectual Capital, Banking Sector, SWOT Analysis, Jordan.

## 1. Introduction

The hyper competition in the business market around the globe has urged management to adopt managerial approaches such as Intellectual Capital (IC) to meet ongoing challenges in the financial service sector which considered having high tech and high knowledge. Bill Gates is one of the richest men in the world, he wasn't born into a wealthy family and he doesn't own any of the traditional generating "capital" like auto factories, coal mines, oil refineries, or gold factories. He became wealthy, because the economy has become less dependent on tangible assets and more on knowledge; we are in the state of Knowledge economy now; therefore to maximize one's returns they must address how they are going to deal efficiently with this era. Understanding and exploiting Intellectual Capital components is a vital and crucial step for success (ESU, 2012). The term "Intellectual Capital" used as a synonym for intangible or knowledge assets (Stewart, 1991). The management of intellectual capital becomes a competitive necessity for making a difference between organization's market value and physical assets value, since the digital era is driven by knowledge, information technology and knowhow principles. According to Marr (2004), intellectual capital most significantly contributes to an improved competitive position of an organization. When management recruit the right people for the right position to achieve the set targets, this must reflects managing intellectual capital (IC) effectively through concentrating on the human capital, structural capital and external capital. Human resources are expected to do more intellectual work than physical work in the business field. Based on this complex and competitive market place, the financial institutions are urged to focus on linking the theme of intellectual capital dimensions with the SWOT analysis in the market and transform themselves into highly intellectual capital organizations to provide a continuum for the improvement process and performance to meet the future challenges and threats, needs and expectations, organizational vision and mission and last but not least reaching the set targets.

## 2. Significance of the Study

The significance of the study stems from the assumption that Jordanian banks are undergoing through dynamic change of the market. Therefore, financial institutions such as banks have to improve their strategic position in the market through conducting studies like intellectual capital and SWOT analysis to clarify the real achievements and success of the banking management.

Indeed, these banking leaders would be able then to strength their overall building plans, and make the right adjustments to the whole process in order to help the decision makers to complete their strategic plans with confidence. Such appropriate results would lead to improve the technical success of SWOT analysis in the banking sector, which is considered as prerequisite to any effective strategic plan. The in-depth focus on the right variables and studying the effect of intellectual capital functions on SWOT analysis blocks, would improve the opportunities of Jordanian banks to succeed in maximizing their shareholder value and profit curve as well. This will give banks a strategic position hold among major banking players in the Jordanian market as well in the region.

### **3. Problem Statement**

Despite the ample theoretical improvement during the last decades, intellectual capital approach- requires an in-depth analysis and advance research methods that enable the fitness and integration of theory structuring and variables testing. Research in this important subject is at critical cross-roads with increased focusing on improving theoretical concepts and testing interrelationships guided by such concepts and approaches. It is essential to consolidate some findings, and reach an operational measure that fit minimal criteria of measurement. However, it is obvious that bank's predominant objectives are to maximize their shareholder value and improving their profit curve in order to hold a strategic position among major banking players in the market. Also, it's known that Jordanian banks are facing big challenges by increasing competition among Jordanian banks which makes banking management pay attention to study thelevel of effect between the intellectual capital functions and SWOT analysis components in the industry. Therefore, banking sector's dilemma reflects the capability of banking managers to stay proactive and innovative in improving the intellectual capital functions in their organizations along with in-depth analysis of the surrounded environment since these components interrelationships are not clear. Accordingly, it is essential to enhance managerial areas such as intellectual capital and SWOT analysis in banking organizations to confront the ongoing environmental changes and challenges in this important industry; since banks are the cornerstone of the economic growth. Accordingly, the core problem statement of this study nested through answering the following questions: To what extend does intellectual capital influence SWOT analysis in the Jordanian banking industry?

### **4. Objectives of the Study**

The study tries to explore how intellectual capital components (Human Capital, Structural Capital, and Relational Capital) can affect the SWOT analysis in the Jordanian banking industry. Accordingly, the main objectives of this study are:

- a- Identify the level of SWOT analysis applications by the banking industry.
- b- To examine the correlation among intellectual capital components and SWOT analysis in the banking environment.
- c- To assess the influence of intellectual capital on SWOT analysis in the Jordanian banking industry.
- d- Developing a model that simulates the relationships effects between intellectual capital and SWOT analysis in the Jordanian banking industry.

### **5. Literature Review**

Economic wealth and knowledge economy are the prime concern for nations and organizations as well. A study conducted by the Economics Institute of Washington, on human intellectual capital stated that, "The economic value of the nation's productivity depends more upon employee skills, knowledge architecture and business problem solving aptitude than it does upon the market value of the firm's commercial output"; accordingly, most experts agree that: in the new millennium, intellectual capital will be the prime resource and essential driver of the information economy (Di Stefano & Kalbaugh, 1999). Although, it has been recognized that economic wealth comes from knowledge assets (intellectual capital), and its useful applications, through replacing or perhaps supplementing land, labour, and capital (Dean and Kretschmer, 2007). Bonti (1996) defined (IC) as the difference between a firm's market value and the cost of replacing its assets, it is those things that we normally cannot put a price tag on, such as expertise, knowledge and a firm's organizational learning ability. On the basis of the proposal by Edvinsson and Malone (1997), intellectual capital is a two-level construct: human capital (the knowledge created by and stored in a firm's employees), and structural capital (the embodiment, empowerment, and supportive infrastructure of human capital).

Meanwhile, those scholars initiate dividing structural capital into organizational capital, they pointed on knowledge creation and storing by firm's process and information technology, also clarify customer capital as the value of relationships between a firm and its customers.

However, Bontis, (1996) stated that customer capital can be viewed as a key element of „relational capital“. So this relational capital represents all external relationships as a „social capital“ (Nahapiet and Ghoshal, 1998; Subramanian and Youndt, 2005). A study conducted by Harreld, *et al.*, (2007) discussed the transformation of IBM under the leadership of LeoGerster and how this CEO was able to leverage IBM's intellectual capital (or what these authors refer to as IBM's 'dynamic capabilities') to redefine the organization. According to Bassi (1999) study, on harnessing the power of intellectual capital, the most widely used definition of intellectual capital is: "knowledge that is of value to an organization", the main elements are human capital, structural capital, and customer capital, this definition clearly suggests that the management of knowledge (sum of the three elements) makes intellectual capital.

Intellectual capital encompasses much more than patents, copyrights and other forms of intellectual property. It is the sum and synergy of a company's knowledge, experience, relationships, processes, discoveries, innovations, market presence and community influence (Miller, 1999). Different studies confirmed that the benefits or potential benefits of Intellectual Capital can only be realized if there is a total "buy in" of the concept within the organization; this may require a significant shift in the organizational culture (Stewart 1997, de Pablos 2003, Sullivan 2000, Montequín, Fernández et al. 2006). A major contribution made by Pike, *et al.*, (2005) is their recognition that interactions between intellectual capital components occur, as revealed in the analysis of organizational strategy in general.

## **6. The Components of Intellectual Capital**

### **6.1 Human capital**

Human Capital reflects a broad framework that related to peoples' knowledge, education and competencies that can be utilized to reach certain tasks and goals. It is the knowledge, skill and capability of individual employees providing solutions to customers (Tapsell, 1997). Human capital is the firm's collective capability to extract the best solutions from the knowledge of its people. It is important because it is a source of innovation and strategic renewal, whether it is from brainstorming in a research lab, daydreaming at the office, throwing out old files, re-engineering new processes, improving personal skills or developing new sales leads (Bontis, 1996). The organizational perspective refers to human capital as "the source of innovation and strategic renewal" (Bontis, 1998). Gupta and Roos (2001) added that "core intellectual capital", comprising competence, intellectual agility and attitude, are the potential of synergies for the value creation. Human resources create knowledge, new ideas, and new products, they establish interpersonal and technical relationships that make processes truly work, the problem may arise when people leave; they take with them their knowledge, which includes external, internal, informal, and formal relationships (Brenner, 1999). Based on that, banks are invited to build, develop and create new knowledge by relying on the current knowledge, skills, experience they have. They can build and generate new knowledge, abilities and industry intelligence by recruiting professional work force that is highly trained and skilled.

### **6.2 Structural Capital**

Management's ongoing concern is to maintain competitive capabilities to meet market requirements. This required practical and competent structures that support the overall demands and quests for overall business performance. Structural Capital represents the 'non-human storehouses of knowledge, which are embedded in its technological, information and communications systems as represented by its hardware, software, databases, laboratories and organizational structures (Bontis, 2004). An individual can have a high level of intellect, but if the organization has poor systems and procedures by which to track his or her actions, the overall intellectual capital will not reach its fullest potential (Bontis, 1996). The structural capital of an operating firm consists of four elements (Saint-Ongo, 1996):

**Systems** - the way in which an organization's processes (information, communication, decision-making) and outputs (products/services and capital) proceed.

**Structure** - the arrangement of responsibilities and accountabilities that define the Position of and relationship between members of an organization.

**Strategy** - the goals of the organization and the ways it seeks to achieve them.

**Culture** - the sum of individual opinions, shared mindsets, values, and norms within the organization.

Bain and Mason (Vibert, 2004) suggest that the behavior of the firms is influenced by the structure of the industry, which in turn determine the collective performance of the firms in that industry. Accordingly, if the organization has a fit structure, then banks become very concern of product innovation to meet customer's necessities by introducing new products. In this case, organizational process should be compatible along with new product launched. Also, leadership is argued to develop new management style with and special auxiliary services are needed.

### 6.3 Relational Capital

Organizational environment plays a major role in organization's success and prosperity. Researchers believe that it's very important to meet stakeholders' expectations; their satisfaction and loyalty are the real indicator of organizational condition in the market. Relational capital concept based on the organizations are open systems and must interact with its surroundings to a great extends in order to stay in the right strategic position. Relational capital includes the value generated by relationships not only with customers, suppliers or shareholders, but with all stakeholders, both internal and external (Hormiga & Batista-Canino, 2010). The knowledge that embedded in the relationships which established within the inter organization and the outside environment is expected to contribute significance value to the organization (Bontis, 1997, Edvinsson, and Sullivan, 1996). The relational capital is defined as customer capital, sometimes customer capital and relational capital is defined similarly (Roos & others, 1997). The focus of relational capital is on organization (Hsu, 2006). Meanwhile, some experts (Prahalad and Ramaswamy, 2000) believe that customers become a new source of organizational competence for the organization because they do renew the overall competence components of the organization and rejuvenate the knowledge base preventing it from the obsolescence in a turbulent environment (Gibbert et al., 2001). The previous thoughts indicate the importance of relational capital as a function of immortalization. Meanwhile, customer loyalty and retention are very vital indications of organizational productivity and prosperity which can be achieved through long lasting relationship.

## 7. The Concept and Components of SWOT Analysis

SWOT Analysis (Strengths, weaknesses, opportunities and threats) is a general framework for directing and assisting strategic planners to identify the appropriate organizational strategies to achieve their goals (Alzoubi, 2004). Managers look at SWOT analysis as a technique to help managers to identify and plan the business goals, and draw the strategies to achieve them. It is a decisive strategic tool that indicates the current opportunities and constraints in the surrounding environment. This instrument helps the planners of what is usually achieved, and what things should be considered by them (Jackson et al, 2003). Many researchers such as Houben et al (1999) embodied the SWOT Framework technique in a (2 x 2) matrix, which could be done in a group, where the key members are from the team or organization. Based on the matrix main idea, the first step is to know clearly and analyses the purpose of the prime changes in and out of the organization and what measures and actions management will be undertaken. Once these subjects are understood and agreed upon by the group, managers can start by brainstorming ideas and then having it acute and clear in the discussion. Estimation of the organizational internal resources will help to identify what is strategic position of the project or organization today is? What resources are required? And what challenges and problems have to be resolved. Once this is completed, SWOT analysis determines what may assist the firm in accomplishing its objectives? And what obstacles must be overcome or minimized to achieve the desired results (Singh, 2010). Accordingly, we can't overlook what distinctive leaders believe? How they look at critical issues? How they define opportunities? And how they overcome the difficulties?

*“An optimist is one who sees an opportunity in every difficulty. A pessimist is one who sees difficulty in every opportunity.”*

*- Sir Winston Churchill –*

Based on that, the following question is expected to be addressed by banking managers: "How can banks take advantage of the analysis of the surrounding environment? Local, regional and international". In fact, this is the hardest part since many managers know the problems, but only a few are able to find appropriate solutions and little could devise optimal solutions.

It is very obvious that many challenges are facing the banking industry in this region, especially when researches proved that most of the Jordanian banks lacking strong presence, insufficient hedging tools, or/and controversy of "large number of local banks in small economy". A study was conducted by Al-fayoumi & Abuzayed (2009), mentioned the most detailed SWOT pillars that challenging the banking industry in the Jordanian environment as shown in table (1).

Table 1

<i>Strength</i>	<i>Weaknesses</i>
<ul style="list-style-type: none"> <li>• Offering a wide range of banking and financial products and financial services to corporate and retail customers through a variety of delivery channels.</li> <li>• Focusing on customization of products that are designed to meet the specific needs of customers.</li> <li>• All Jordanian banks have complied with international capital adequacy requirements and prudential norms.</li> <li>• Wide distribution of banks' branches and accessibility of the banking facilities on the local level.</li> <li>• Better than acceptable percentage of non-performing loans.</li> <li>• Diversified ownership, where different investors from the region participate in banks capital.</li> <li>• Acceptable efforts to cope with GATS requirements.</li> <li>• Modern regulation and institutions for the private sector development and privatization.</li> </ul>	<ul style="list-style-type: none"> <li>• Most of banks lack strong and direct regional presence.</li> <li>• Insufficient hedging tools applied. The banks resort to diversification among sectors by giving weights to these sectors when granting facilities as a measure of hedging but disregarding country risk, which accordingly would affect the value of all of their portfolios.</li> <li>• A large number of local banks in small economy. The market remains over-banked, with 23 full commercial banks serving a population of 5.9million.</li> <li>• The banking sector remains dominated by the Arab Bank, which, together with the Housing Bank for Trade and Finance, accounts for over 35% of total system assets. Therefore, the Jordanian banking sector can be considered as a highly concentrated market.</li> <li>• Most banks are below international standards of operating efficiency.</li> </ul>
<i>Opportunities</i>	<i>Threats</i>
<ul style="list-style-type: none"> <li>• Mergers with or acquisitions of other banks.</li> <li>• An opportunity for more expansion of the banks' retail services, this segment still has room for growth. Historically, Jordanian banks Concentrated on wholesale operations because they think that this type of business is more profitable comparing with retail operations.</li> <li>• Efficient employees and good working conditions enable these banks to reduce the operating cost of the functions and increase return on investments.</li> <li>• Expand banks' operations to cover countries in the region.</li> <li>• Mastering new strategies and techniques in risk management and competition.</li> <li>• Discovering the advantages of economies of scale and scope in addition to management efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing volatility in local and regional markets.</li> <li>• Net Interest Margin (NIM, differential between interest on time-deposits and loans) pressure is likely to continue from intensifying foreign competition.</li> <li>• Most Jordanian banks – with the notable exception of Arab Bank – are focused on the local market, which means that they should expand their operations outside Jordan.</li> <li>• Fluctuations in economic variables including decreased purchasing power and higher inflation rates. This could have two negative effects in terms of increased costs and higher possibility of payment default.</li> <li>• The Central Bank of Jordan (CBJ) has encouraged consolidation in the system, although so far there have been few signs that banks are keen to consolidate, partly reflecting a culture of family ownership in Jordan.</li> <li>• Applying new methods of information technology and upgrading the skills of staff and management</li> </ul>

## 8. Operational Definitions

The study used the following operational definitions while it's trying to interpret the interrelationship of the independent and dependent variables.

**Intellectual Capital:** It is a useful package of knowledge such as organization's processes, skills, trademarks and brands which don't appear on the organization's balance sheet but enable the organization to convert it to a competitive advantage and profit.

**Human Capital:** It is a broad framework that related to peoples' knowledge, skills, capabilities, education and competencies that can be utilized to reach assigned tasks or goals.

**Structural Capital:** Everything embedded within the organization structure and processes such as database, software, hardware, technology and every means that support the employees to contribute to the organization significantly.

**Relational Capital:** It is "Knowledge-based stakeholders".

**SWOT analysis of Financial Institutions:** It is a managerial process which allows analysts to categorize the external and internal factors to enable management to take a given decision efficiently, better exploit all banking resources and take advantages of future opportunities in the environment, taking in considerations the Strengths, Weaknesses, Opportunities and Threats of the financial institution.

## 9. Previous Studies

Goh, Pek Chen study (2005): the study had measured the intellectual capital performance of "commercial banks" working in Malaysia during (2001 to 2003), using efficiency coefficient called VAIC". The findings proved that Malaysian banks have relatively human capital efficiency than structural and capital efficiencies. Meanwhile, foreign banks were more efficient than domestic ones. Also, there were significant differences between rankings of domestic and foreign banks according to certain measures such as: efficiency and traditional accounting.

Kamath G. Barathi study (2007): The study conducted on the banking Sector in India during a five years period from 2000 to 2004. It analyzed and estimated the Value Added Intellectual Coefficient (VAICTM) to measure the value-based performance. The statistical findings confirm the existence of significant differences in the performance of Indian banks in varies segments, also the results showed an improvement in the overall performance over the study period.

Yu-Shan Chen (2007) study explored intellectual capital on green innovation or Environmental management, this research study aims to fill the research gap and to study the relationship between green intellectual capital and 19 competitive advantages of firms, the empirical results of the study revealed that the three types of green intellectual capital-human, structural, relational capital have positive effects on competitive advantages of firms. Meanwhile, these results revealed that relational capital was the most common among of those three types of intellectual capital of Medium and Small Enterprise (SMEs) were all significantly less than those of large firms in the electronics and information industry in Taiwan.

Lengnick, and Abdinnour (2004) studied the role of social and intellectual capital in achieving competitive advantage through enterprise resource planning systems (ERP). A test of (ERP) systems used technical criteria established in research on resource-based views of firms and chaos/complexity theory which indicates that these claims are overstated.

Norsaliza and Haslenda study (2008), investigated the efficiency of intellectual capital among banking sectors in Malaysian banking industry. Time duration for the study was 10 years that covered from 2000 to 2010 and data were collected from financial statements for every company. Model that was used for the study was taken by Public study (1998) which proposed Value Added Intellectual Coefficient (VAIC) as an indirect measure of efficiency of value added by corporate Intellectual Capital. As a result it was found that banking sectors in Malaysia have relatively higher intellectual capital efficiency

**10. Demographic profile**

The population of the study represents "all managers working in the national banks across the Hashemite kingdom of Jordan". The research paper had a sample study of (71) respondents (branch manager, department manager, team leader, or supervisor) as shown in table (2), the sample was divided between males (69%) and females (31%). Also, the statistical results showed that the majority of staffs (60.2%) in the banking industry are between (30) years of age and less than (50) years, meanwhile, (39.4%) of the managers are holding master's degree.

**Table 2: Personal characteristic n=71**

Demographic Variables		Freq	%	Demographic Variables		Freq.	%
Gender	Male	50	69	Experience	Less than 5 years	11	15.4
	Female	21	31		5- Less than 10 years	27	38.2
Age	Less than 30 years	11	15.6		10- Less than 15	21	29.5
	30-Less than 40 years	19	26.5		15 years and over	12	16.9
	40- Less than 50 years	24	33.7	Job Title	Branch Manager	7	9.8
	50 Years and over	17	24.0		Department Manager	19	26.7
Academic classification	Ph.D.	6	8.4		Supervisor/ team leader	45	63.3
	Master Degree	28	39.4				
	Bachelor Degree	37	52.2				

**11. Study Questions and Hypotheses.**

**11.1 Questions of the study**

- 1- Do Jordanian banks execute the SWOT analysis systematically?
- 2- To what extend do Jordanian banks recognize the importance of intellectual capital?
- 3- Is there a significant correlation between intellectual capital and SWOT analysis in the Jordanian banking industry?
- 4- Is there an influence of intellectual capital on SWOT analysis in the Jordanian banking industry?

**11.2 The main hypothesis of the Study**

**H<sub>0</sub>**- There is no significant impact of Intellectual Capital on SWOT analysis in the Jordanian banking industry.

The hypothesis is broken in to three minor hypotheses:

**H<sub>0</sub>: a-** There is no significant impact of Human Capital on SWOT analysis in the Jordanian banking industry.

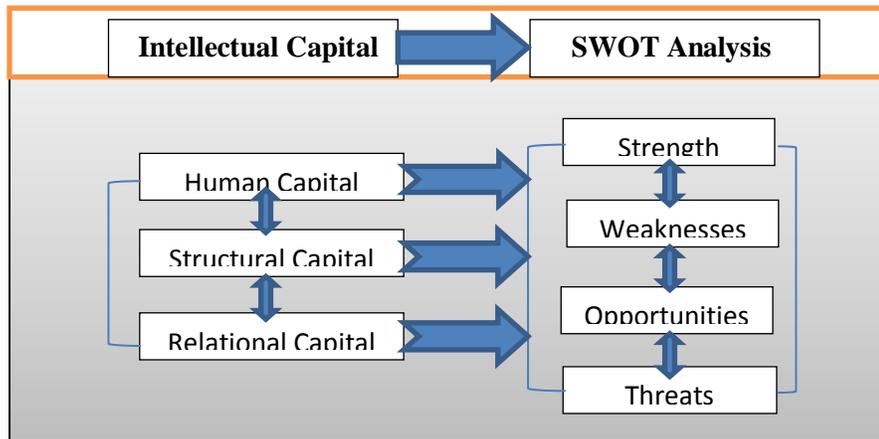
**H<sub>0</sub>: b-** There is no significant impact of Structural Capital on SWOT analysis in the Jordanian banking industry.

**H<sub>0</sub>: c-** There is no significant impact of Relational Capital on SWOT analysis in the Jordanian banking industry.

**12. Frame Work of the Study**

The study developed a conceptual framework that represents the independent variables and dependent variables and it's components as shown in (fig 1). The first block represents the intellectual capital as follow: human capital, structural capital and relational capital. While the second block represent the SWOT analysis: strength, weaknesses, opportunities and threats.

Figure 1: Study Model



### 13. Research Methods

#### 13.1 Population of the study

The population of this study consisted of all national institutional banks working in the Jordanian banking industry. Official statistical sources on banking sector report on Jordan-2012, indicated a total number of (26) working banks with (629) branches across the kingdom. There are (13) national-commercial Banks, (3) banks are national-Islamic Banks and (10) are branches of foreign banks (Khamash, 2012). Random sampling of (8) national banks were selected, (10) Surveys were distributed to each bank accumulating (80) ones. (71) Surveys were included in the analysis.

#### 13.2 Nature of the study

This applied study is an analytical research study; since it's seeking to know the influence of Intellectual Capital on SWOT analysis in the Jordanian banking industry. It will study and analyze the inter correlations and effects of the independent and dependent factors.

#### 13.3 Unit of analysis

Branch managers, department managers, supervisors and team leaders working in the Jordanian banking industry are the target unit of analysis.

#### 13.4 Source of Data

Secondary data was based on the following research tools: Personal interviews, previous studies, published articles, books and the World Wide Web. Meanwhile, the primary data collections were carried out using a questionnaire to serve the aim of the study. Nevertheless, the primary data collection was carried out using a questionnaire to serve the aim of the study.

#### 13.5 Study Instrument

A questionnaire was presented to collect the primary data in this research study, it consisted of four parts: the first part covers the demographic information, the second part has a number of (closed-open questions) to find out if the banks are executing the SWOT analysis systematically (1-4). The third part has the intellectual capital questions, (21) questions were designed to cover the independent variables as follow: Human Capital (5-11), Structural Capital (12-18), and Relational Capital (19-25). The fourth part (dependent variables) consist of (12) items representing SWOT analysis: Strength (26—28), Weaknesses (29-31), Opportunities (32-34), and threats (35-37). The statistical weights of the survey used yes/no question for the second part (1-4) which been analyzed based on percentile results. The fourth part of the questionnaire (table 10) , used five points likert scale with responses ranging from (1 to 5), where 1 = Strongly Disagree, 2 = Disagree, 3 = undecided, 4 = agree and 5 = strongly agree. The questionnaire was designed based on Practical studies conducted by different banking institutions and researchers in Jordan, USA and Australia (Alfayoumi & Abuzayed, 2009; Bendigo Bank Limited, 2013).

**13.6 Validity and Reliability of Data**

The questionnaire was presented to (5) banking experts and distributed to a pilot sample of (10) managers in order to ensure the face validity of the instrument tool. The questionnaire was modified according to the expert's comments, and a validity test was performed to justify its consistency. The correlation coefficient of (0.9129) was obtained which is acceptable for the purpose of this study. Cronbach alpha score for the Independent Variable = (0.9192), while for the dependent Variable = (0.8806).

**13.7 Data Analysis**

The research study used the (SPSS) package to test the hypothesis: means, frequencies, percentages and standard deviation were used in order to answer the study questions and analyzed the demographic characteristics of the respondents. Multiple and simple (enter) regression was implemented to test the influence of intellectual capital on SWOT analysis and specifying which intellectual capital sub-variable has the strongest influence on SWOT analysis.

**14. The statistical Results of study Questions**

**a- Do the Jordanian banks execute the SWOT analysis systematically?**

As shown in table (3), the study had four specific questions to find out the level of SWOT analysis execution in the banking environment. The statistical results showed that (84%) of the banking managers respondents believe that Jordanian banks are very concern on executing all means of SWOT analysis in their banks. This result is a very important indication that management is very close and sensitive to the regional and international economic and political changes which may affect the strategic planning banking wise. Therefore, management is paying attention to the surrounding environment to cope efficiently with the challenges.

**Table 3: Analysis of Jordanian Banking Environment n=71**

No.	Banking Environment Items	Yes	%	No.	%
1	Our bank has a separate section for strategic analysis	57	80.7	14	19.3
2	There are specialized committees to follow up on developments in the financial markets	63	89.1	8	10.9
3	Management is very concern about the result's analysis of the bank's strategic environment	66	95.1	5	4.9
4	Strategic Analysis occupies a special priority in the interests of the bank.	58	73.4	13	26.6

**b- To what extend do the Jordanian banks recognize the importance of intellectual capital?**

Generally, the arithmetic mean as shown in Table (4) for human capital is (3.94), while for structural capital is (3.73), and for relational capital was (3.82). Meanwhile, the arithmetic mean for the intellectual capital components as a whole was (3.83). The standard deviation for these variables ranges from (0.55 to 0.67).The results reflect a concern of Jordanian banks in investing in intellectual capital components. Also, the statistical results showed that banking management has a very good recognition of SWOT analysis importance and priorities in the banking industry in the Jordanian environment.

**Table 4: Intellectual Capital and SWOT Analysis Importance**

Descriptive Statistics			
	N	Mean	Std. Deviation
HC	71	3.9416	.55306
SC	71	3.7324	.62407
RC1	71	3.8263	.67989
INTCAPITAL	71	3.8334	.56411
SWOT	71	3.7277	.55652
Valid N (listwise)	71		

**c- Is there a significant correlation between intellectual capital and SWOT analysis?**

A correlation Coefficient between the four variables of intellectual capital namely (Human capital, Structural capital, Relational capital) and SWOT Analysis, were shown in the Table (5). The correlations coefficient between all components of intellectual capital and SWOT analysis in the Jordanian banks were positive and significant at ( $P \leq 0.01$ ) level (2-tailed). Meanwhile, the correlation Coefficient between intellectual capital and SWOT analysis in the banking industry is (.637) and significant at ( $P \leq 0.01$ ) level (2-tailed). Meanwhile, the other question of the study will be answered among analyzing the study hypotheses. This positive result above was somehow expected since the banking environment in Jordan is well regulated and competitive due to some reasons such as the political and economic stability in the kingdom, which has been an important support to the economic growth for the last years despite the ongoing economics and political transformations in the region.

**14.1 Hypotheses Statistical Analysis**

Regression Analysis:

SWOT analysis was regressed against three variables of intellectual capital namely (Human capital, structural capital and Relational capital). The equation for SWOT Analysis was expressed in the following equation:

$Y_s = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3$ , Where,

$Y_s$  = SWOT Analysis

$\beta_0$  = constant (coefficient of intercept)

$X_1$  = Human capital

$X_2$  = Structural capital

$X_3$  = Relational capital

$B_1, \dots, B_3$  = regression coefficient of three variables .

**14.2 Hypotheses Testing Results**

**$H_0$ - There is no significant impact of Intellectual Capital on SWOT analysis in the Jordanian banking industry.**

Table (6) showed the results of the regression analysis for the main hypothesis. The study predict the fitness for goodness of the regression model, the multiple correlation coefficient (R), coefficient of determination ( $R^2$ ), and F ratio were examined. First, the R of independent variables (Three factors,  $X_1$  to  $X_3$ ) on the dependent variable (SWOT Analysis) is (0.637), which showed that the SWOT Analysis had positive and high overall association with the three components. Second, the  $R^2$  is (0.406), suggesting that more than 40% of the variation of SWOT Analysis was explained by the three components. Last, the F ratio, which explained whether the results of the regression model could have occurred by chance, had a value of 47.239 ( $p = 0.00$ ) and was considered significant.

**Table 5: Correlations of Intellectual Capital Components and SWOT Analysis**

		Correlations				
		INTCAPITAL	HC	SC	RC1	SWOT
INTCAPITAL	Pearson Correlation	1	.839**	.944**	.940**	.637**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	71	71	71	71	71
HC	Pearson Correlation	.839**	1	.676**	.654**	.535**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	71	71	71	71	71
SC	Pearson Correlation	.944**	.676**	1	.881**	.591**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	71	71	71	71	71
RC1	Pearson Correlation	.940**	.654**	.881**	1	.609**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	71	71	71	71	71
SWOT	Pearson Correlation	.637**	.535**	.591**	.609**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	71	71	71	71	71

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 6: Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.637 <sup>a</sup>	.406	.398	.43187	.406	47.239	1	69	.000	2.275

a. Predictors: (Constant), INTELCUALLAPITAL

b. Dependent Variable:

As a result of the previous figures, we found that the regression model achieved a satisfactory level of fitness in predicting the variance of SWOT analysis in relation to the three components, as measured by the below – mentioned R, R<sup>2</sup>, and F ratio. In other words, at least one of the three components was important in contributing to SWOT analysis.

**Table 7: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.811	1	8.811	47.239	.000 <sup>a</sup>
	Residual	12.869	69	.187		
	Total	21.680	70			

a. Predictors: (Constant), INTELCUALLAPITAL

b. Dependent Variable:

Based on the regression analysis results (tables: 7, 8), we reject the null hypothesis and accept the major research hypothesis that indicates a significant impact of Intellectual Capital on SWOT analysis in the Jordanian banking industry at level of (P ≤ 0.01).

**Table 8: Beta Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficient	t	Sig.	95% Confidence Interval		Correlations		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	1.311	.354		3.714	.000	.610	2.024			
	INTELCUALLAPITAL	.629	.092	.637	6.873	.000	.446	.811	.637	.637	.637

a. Dependent Variable:

**H<sub>0</sub>:a- There is no significant impact of Human Capital on SWOT analysis in the Jordanian banking industry.**

Table (9) depicts the impacts of Human Capital on SWOT. As tabulated, it was discovered that the value of R<sup>2</sup> for Human Capital is (0.28) and (f= 27.669, P= 000) which explain (28%) of variance in SWOT analysis. Therefore, Human capital was found to have a significant and positive effect on SWOT analysis, also the regression coefficient (β = 0.535, p=000). Based on the result, we can't accept the null hypothesis and accept the research hypothesis that indicates a significant impact of Human Capital on SWOT analysis in the Jordanian banking industry at level of (P ≤ 0.01).

**Table 9: Intellectual components regression results**

Variable	f	R <sup>2</sup>	Beta	Sig
Human capital	27.669	0.286	0.535	P ≤ 0.01
Structural capital	37.083	0.350	0.591	P ≤ 0.01
Relations capital	40.659	0.371	0.609	P ≤ 0.01
Intellectual Capital (3 components)	47.239	0.406	0.637	P ≤ 0.01

**H<sub>0</sub>.b- There is no significant impact of Structural Capital on SWOT analysis in the Jordanian banking industry.**

Table (9) depicts the impacts of Structural Capital on SWOT. As tabulated, it was discovered that the value of R<sup>2</sup> for Structural Capital is (0.35) and (f= 37.083, P= 000) which explain (35%) of variance in SWOT analysis. Therefore, Structural Capital was found to have a significant and positive effect on SWOT analysis, also the regression coefficient ( $\beta = 0.591$ , p=000). Based on the result, we can't accept the null hypothesis and accept the research hypothesis that indicates a significant impact of Structural Capital on SWOT analysis in the Jordanian banking industry at level of (P $\leq$  0.01).

**H<sub>0</sub>.c- There is no significant impact of Relational Capital on SWOT analysis in the Jordanian banking industry.**

Table (9) depicts the impacts of Relational Capital on SWOT analysis. As tabulated, it was discovered that the value of R<sup>2</sup> for Relational Capital is (0.37) and (f= 40.659, P= 000) which explain (37%) of variance in SWOT analysis. Therefore, Relational Capital was found to have a significant and positive effect on SWOT analysis, also the regression coefficient ( $\beta = 0.609$ , p=000). Based on the result, we can't accept the null hypothesis and accept the research hypothesis that indicates a significant impact of Relational Capital on SWOT analysis in the Jordanian banking industry at level of (P $\leq$  0.01). In the regression analysis, the beta coefficients were used to explain the relative importance of the three components (independent variables) in contributing to the variance in SWOT analysis (dependent variable). As far as the relative importance of the three intellectual capital components is concerned, relational capital, ( $\beta = 0.609$ , p=0.000) carried the heaviest weight for SWOT analysis, followed by structural capital, ( $\beta = 0.591$ , p=0.000), human capital, ( $\beta = 0.535$ , p=0.000). The results showed that a one-unit increase in relational capital would lead to a (0.609) unit increase in SWOT analysis, one-unit increase in structural capital would lead to a (0.591) unit increase in SWOT analysis, one-unit increase in human capital would lead to a (0.535) unit increase in SWOT analysis. On the top of that, the beta coefficient for Intellectual capital as a whole was ( $\beta = 0.637$ , p=0.000). In conclusion, the results of entered regression analysis agreed that there is relationship between intellectual capital attributes and the overall SWOT analysis in the Jordanian banking industry. So, this is a statistical conformation that there is a significant impact of intellectual capital on SWOT analysis in the Jordanian banking industry, which is what the research study expected.

**15. Findings and Recommendations**

- 1- The study revealed that Jordanian banking staffs were divided between males (69%) and females (31%).
- 2- The statistical results showed that the majority of staffs (60.2%) in the banking industry are less than (50) years of age, and (39.4%) of the managers are holding master's degree.
- 3- The study revealed that (84%) of the banking managers believe that Jordanian banks are executing very well all means of SWOT analysis in their banks and very aware of the regional environmental changes.
- 4- The study found out that the correlations coefficient between all components of intellectual capital and SWOT analysis in the Jordanian banks was positive (.635) and significant at (P $\leq$  0.01) level (2-tailed).
- 5- The statistical evidence from the study showed that there is an existence relationship effect between the intellectual capital and SWOT analysis in the Jordanian banking industry, In addition, the study showed that  $\beta$  value for intellectual capital components ( $\beta = 0.609$ , p=0.000) is significant at (P $\leq$  0.01).
- 6- The study indicated a statistical evidence to support the significant relationship effect between the human capital and SWOT analysis at (P $\leq$  0.01).
- 7- The study indicated a statistical evidence to support the significant relationship effect between the structural capital and SWOT analysis at (P $\leq$  0.01).
- 8- The study indicated a statistical evidence to support the significant relationship effect between the relational capital and SWOT analysis at (P $\leq$  0.01).

**Based on the results, the study recommends the following:**

- 1- Jordanian banks urged to build special and professional committees to simulate the ongoing changes in the banking environment in order to get the best out of the SWOT analysis.
- 2- Jordanian banking management is invited to improve the operating efficiency standards to reach the international level.
- 3- Jordanian banks should work very hard to strength their presence in the region and around the globe.

### Implications of the study

Finally, the study revealed strongly that Intellectual capital components are recognized as a strategic asset for maintaining strategic competitive position in the market. Efficient financial institution recruits the right human capital, train them, and equip them with the necessary skills to build a solid knowledge base organization that yields greater revenue and market share along with better performance to accomplish stakeholders' objectives. Our discussion suggests that SWOT analysis is a very important tool to cope with the ongoing changes in the financial market in Jordan and worldwide. The study offers banking managers with a good understanding of how intellectual capital can affect SWOT analysis in the Jordanian market to avoid any sudden surprises in the banking sector when evaluating the current market or pointing on a potential target.

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**Table 10: Study Survey Questions, the Role of Intellectual Capital on SWOT Analysis among Jordanian Banking Industry.\***

<b>No</b>	<b>Human capital Items</b>
5	Our banking staffs are commit and competent to improve the organizational system.
6	Human skills, experience and knowledge are applications embedded within our banking staffs.
7	Human capabilities embedded within our banking staffs.
8	Human innovation resides within our banking staffs.
9	Our banking institution considered providing distinctive financial service and developing new sales leads.
10	Our staffs are professionals in providing financial solutions and creating new products.
11	Our staffs are capable of establishing interpersonal relationships with each other's and customers as well
<b>No</b>	<b>Structural capitalItems</b>
12	Our bank embeds appropriate knowledge, information and communication process within its structure.
13	Meeting ongoing market requirements is a priority to our banking management.
14	Our banking's structure concern on building and improving store house of knowledge through empowering our staff.
15	Our banking's system and procedures are clear and efficient.
16	Our staffs have full access to share and improve the available data base and enrich it.
17	Our staff's priority is improving our banking products and services through exchanging knowledge.
18	Our banking's structure encourages shared mindsets, values, and norms.
<b>No</b>	<b>Relational capitalItems</b>
19	Our Staffs are skilled in collaborating with bank's network of associates positively through compassion, respect and confidence.
20	We keep working on understanding customers' needs and expectations.
21	Our staffs exchange and share knowledge, information and data to improve the overall organizational competitive position.
22	Our staffs are committing to strength bank's capabilities and reputation in the country.
23	Our banking management motivates staffs to improve their skills and capabilities.
24	Our bank is holding a critical understanding and intelligence about other banks' conditions.
25	Our staffs interact with stakeholders by Engaging with our shareholders, customers and the community.
<b>No</b>	<b>SWOT Analysis Items</b>
26	All Jordanian banks have complied with international capital adequacy requirements and prudential norms.
27	We hold a strong brand name in the market which gives a major strength of our bank.
28	Superior technology allows us to better meet the needs of our customers in ways that competitors can't imitate.
29	Management works on Expanding banks' operations to cover countries in the region.
30	Management mastering new strategies and techniques in risk management and competition.
31	Greater innovation can help to produce unique products and services that meet customer's needs
32	Most of Jordanian banks lack strong and direct regional presence.
33	A large number of local banks in small economy. The market remains over-banked, with 26 full commercial banks serving a population of 6.3 million.
34	Most Jordanian banks are below international standards of operating efficiency.
35	Fluctuations in economic variables including decreased purchasing power and higher inflation rates.
36	Increasing volatility in local and regional markets.
37	Politics can increase risk factors, because governments do quickly change business rules that negatively affect our business

\*Degree of acceptance range from (5) points for strongly agree, and (1) point for strongly disagree.