

© 2023, Emerald Publishing Limited. This AAM is provided for your own personal use only. It may not be used for resale, reprinting, systematic distribution, emailing, or for any other commercial purpose without the permission of the publisher.

This is the accepted version of Salehi, M., Rajaei, R., Khansalar, E. and Edalati Shakib, S. (2024) "Intellectual capital, social capital components and internal control weaknesses: evidence from Iran's business environment", *Journal of Islamic Accounting and Business Research*, Vol. 15, No. 5, pp. 838-875 which can be accessed at <https://doi.org/10.1108/JIABR-05-2022-0121>.



**Intellectual Capital, Social Capital Components and Internal Control Weaknesses: evidence from Iran's business environment**

Journal:	<i>Journal of Islamic Accounting and Business Research</i>
Manuscript ID	JIABR-05-2022-0121.R3
Manuscript Type:	Research Paper
Keywords:	social capital, intellectual capital, IT, internal control weakness

SCHOLARONE™  
Manuscripts

## Intellectual Capital, Social Capital Components and Internal Control Weaknesses: Evidence from Iran's Business Environment

### Abstract

**Purpose**– This paper aims to determine whether there is a relationship between intellectual capital and social capital and internal control weaknesses and assess the relationship between the variables of intellectual capital and social capital and internal control weaknesses.

**Design/Methodology/Approach**– The statistical population consists of 1309 firm-year observations from 2014 to 2020. The research hypothesis is tested using statistical methods, including multivariate, least-squares, and fixed-effects regression.

**Findings**– The results demonstrate a negative and significant relationship between intellectual capital, social capital, and internal control weaknesses. The study also finds that increased intellectual and social capital quality improves human resource utilization, control mechanism, creativity, and firm performance. The results also show that intellectual capital and social capital enhancement will reduce internal control weaknesses in the upcoming years.

**Originality/value**– This paper is the pioneer study on the relationship between intellectual capital and social capital and internal control weaknesses in Iran, carried out separately and in exploratory factor analysis. This paper considers intellectual capital components for theoretical factor analysis, including human capital, structural capital, and customer capital. Internal control weakness is assessed based on financial, non-financial, and IT weaknesses.

**Keywords:** intellectual capital, social capital, internal control weakness

## 1. Introduction

The quality of financial reporting has been a concern of scholars for a long time. The internal elements of firms, such as internal control mechanisms and other accounting factors, such as cost behaviour, are explanatory in this regard (Salehi et al., 2018). It is believed that internal controls have played a vital role in running companies in recent years (AICPA, 2001; COSO, 2013). Internal controls' primary goal is to reestablish the investors' trust in companies by improving the disclosure. According to financial statements, firms and audits must evaluate and report internal controls' main weaknesses (PCAOB, 2004). On the one hand, a strong internal control system may improve a company's performance (Feng, Mcvay and Skaife, 2015; Zhou, Chen and Cheng, 2016), reduce the risk of falling stock prices (Chen et al., 2017), increase innovation (Li, 2020; Chan, Chen and Liu, 2021), equity and the company's financial performance (Vu and Nga, 2021) and reduce fraud by company employees (Nawawi and Salin, 2018). In other words, the strong internal control mechanisms might result in positive outcomes by strengthening regulatory systems, including internal control and financial reporting quality (Altamuro and Beatty, 2010) and increasing accounting information comparability (Li, Xia and Wu, 2022). On the other hand, a lack of strong internal controls in companies may have a negative impact on the cost of equity (Gordon and Wilford, 2012; Zakaria, Novavi and Salin, 2016). Also, an effective internal control system has been introduced as one of the critical factors in fraud prevention, and companies with poor internal control mechanisms are more likely to prepare poor financial reporting quality (Qish and Lee, 2013; Lari Dashtbayez, Salehi and Safdel, 2019). The meta-analysis of Daemigah (2020) shows that auditors may charge larger companies, as well as companies with weaker internal control systems, lag in their audit reports (Atridge, Lee, & Sun, 2006) and usually pay higher audit fees (Bae et al., 2021). Salehi et al. (2019) demonstrate that expert auditors are willing to improve audit quality. Therefore, the literature propositions and empirical findings show the importance of internal control mechanisms in business environments. Such a prominent element has motivated the authors to shed further light on two other potentially influential factors, including IC and SC, on the internal control weaknesses in Iran's business environment.

IC comprises an organization's expertise, knowledge and associated intangible assets (Li-Chang & Wang, 2012; Tayles et al., 2007; Widiatmoko et al., 2020). Further definitions also describe IC as the accumulated intangible assets within an organization (Nkundabanyanga, 2016). More specified definitions express IC into some sub-components, including human, structural and relational capitals (Bontis et al., 2000; Clarke et al., 2011; Riahi-Belkaoui, 2003). Human capital implies a company's employees' talents, skills and expertise needed to practice

1  
2  
3 their daily occupational responsibilities (Rezaei and Mousavi, 2015). Structural capital  
4 includes the necessary infrastructure, databases and processes of a company designed to assist  
5 its human capital in operating (Kamukama, 2013). Relational capital mainly refers to the  
6 abilities, opportunities, knowledge, systems and procedures remarkably developed based  
7 on  
8 the external relationships of a company (Kalkan et al., 2014). Some scholars argue that  
9 intellectual capital components comprising human capital, structural capital, and relational  
10 capital may have a positive impact on the strength of internal controls (Kaawaase et al., 2019;  
11 Bananuka et al., 2019; Nkundabanyanga, 2016; Rezaei and Mousavi, 2015; Kalkan et al., 2014;  
12 Kamukama, 2013; Bontis, 2001; Bontis et al., 2000); Because it is argued that internal controls  
13 might be more effective in atmospheres where they are supposed to be practically prominent.  
14 Thus, improved structural, human, and relational capital might establish effective internal  
15 controls. Studies show that the staff's non-qualification usually leads to inefficiency in internal  
16 controls (Doyle, Ge, and Mcvay, 2007). Since employees are the firm's IC, managers expect  
17 them to detect weaknesses and deal with fraud (Sahloul, 2019). Employees and their  
18 experiences are among the main factors in economic growth, without which any expectation  
19 for growth is fruitless (Pokynchereda, Gudzenko, and Nastenکو, 2017). The company's ability  
20 to manage human resources creates a competitive advantage (Chadwick and Flinchbag, 2021).  
21 In addition, social capital theory concentrates on the interrelationships of individuals with  
22 internal and external bodies to mobilize their resources more effectively to meet higher returns  
23 (Burt, 2001, 2007, Adler and Kwon, 2002). The SC, which might also result from a given firm's  
24 environmental-friendly activities, may be considered influential in improving corporate  
25 governance mechanisms such as internal control effectiveness. Previously conducted empirical  
26 papers suggest that firms engaged in corporate social responsibility may apply effective  
27 business procedures to improve the accountability and transparency of financial reports to  
28 satisfy the stakeholders. Kim et al. (2012) argue that socially accountable firms improve their  
29 financial reporting quality through less accruals and real earnings management. Therefore, it is  
30 expected that companies possessing more social capital, due to their moral behaviour, are likely  
31 to practice cooperation in trust with their stakeholders, preventing them from opportunistic  
32 behaviour (Jones, 1995). In other words, firms with more SC will likely improve their reporting  
33 quality through stronger internal controls.

34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55 The current paper extends the accounting literature to some extent. This research is among the  
56 pioneer attempts to assess the role of intellectual capital advancement in business markets and  
57 its impact on improving internal controls. Prior studies mostly emphasized the relationship  
58 between social structure and creativity (Sozibilir, 2018) and the influence of intellectual capital  
59  
60

1  
2  
3 on firm performance (Hashim, Osman, and Alhabshi, 2015; Ginesti, Caldarelli and Zampella,  
4 2018; Lee and Lin, 2019). This study is concerned with the relationship between intellectual  
5 capital and the weaknesses of internal controls. It is postulated that intellectual and social  
6 capital improve internal controls with more creativity. Furthermore, to the best of the authors'  
7 knowledge, this study is the first research providing detailed outcomes regarding the types of  
8 internal control weaknesses such as financially-related, financially-unrelated and IT-related  
9 internal control weaknesses. Additionally, most studies having relevant research questions are  
10 conducted in non-Islamic countries; for instance, the association between intellectual capital  
11 components and corporate governance mechanisms are examined in Mexico (Hidalgo et al.,  
12 2011), the relationship between social capital and corporate governance in the UK and USA  
13 (Booth-Bell, 2018) and Australia (Subramaniam et al., 2013). This is among the first studies  
14 dealing with a specific component of corporate governance mechanisms and social and  
15 intellectual capital components in an Islamic country. Finally, in terms of statistical approach,  
16 in the present study, the factor analysis of intellectual capital components, including human,  
17 structural and customer capital, is used for the first time to measure the intellectual capital and  
18 factor analysis of three financial weakness variables, non-financial weaknesses and IT internal  
19 control weakness. The Legatum welfare index is used for measuring social capital.

20  
21 The rest of the paper is arranged as follows. The authors discuss the theoretical framework and  
22 present related literature in the next section. Then, the research methodology and variable  
23 definitions are included. In the fourth section, the authors provide obtained results and discuss  
24 them. Finally, in the fifth section, the paper is concluded.

## 2. Theoretical issues and literature review

### 2.1. *The weakness of internal controls*

25  
26 According to the COSO framework, the board of directors and other staff are required to design  
27 the internal control mechanisms to achieve the three objectives: 1. Operational efficiency; 2.  
28 Financial report insurance; and 3. Compliance with relevant rules (King, 2016; Rae, sands, and  
29 Subramaniam, 2017). Control environment, risk evaluation, control activities, information, and  
30 monitoring are internal control components that affect goal achievement (King, 2016; Rae,  
31 Sands, and Subramaniam, 2017). The factors also affect internal controls: firm size, financial  
32 risk, operational complexity, and available company (Krishnan, 2005; Ashbaugh Scaife et al.,  
33 2007; Doyle, Ge, and MCvay, 2007).

34  
35 A strong internal control system should turn a business unit with various goals into a business  
36 entity having a unified purpose (Ouchi, 1979). Effective internal controls may lead to  
37 competitive advantage because it enables firms to deal with more risks (IFAC, 2012). After the  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 financial scandals, SOX obliged managers to analyze internal controls. According to SOX's  
4 act, management and auditors are required to evaluate internal controls and disclose their  
5 potential weaknesses. Thus, companies that improve their internal control weaknesses might  
6 achieve better results (Feng et al., 2015). Chang et al. (2019) show that a bigger auditing system  
7 increases the performance of internal auditing. They also offer a positive relationship between  
8 internal audit proficiency and the effectiveness of internal control.  
9

10  
11 To obtain a more precise and detailed set of findings, the financial, non-financial, and IT-  
12 related weaknesses are investigated discriminately in this study. Since IT enhancement has  
13 played a monitoring and controlling role in financial markets in recent decades, analyzing the  
14 weaknesses of internal controls related to IT environments, including access to policies,  
15 programs, data, computer operations and change management, may provide significant  
16 information for practitioners (Kuhn et al., 2013). Typically, IT controls consist of two parts  
17 comprising public sector controls (IT environments such as computer operations and access to  
18 applications and data) and practical controls (input and output and information processing)  
19 (Romney and Steinbart, 2009). In this regard, Abbaszadeh, Salehi, and Faiz (2019) found a  
20 significant relationship between information technology and internal controls (administrative  
21 controls, financial and accounting, risk evaluation, information, and control activities).  
22  
23

## 24 **2.2. Intellectual Capital**

25  
26 The intangible economic aspect is based on intellectual capital, the main component of  
27 information and knowledge. Corporations need these two components to participate in markets  
28 and improve performance (Lev, 2000). Intellectual capital is one of the main concepts of  
29 intangible assets (Venieris, Naoum, and Vlismas, 2015), which creates value for the company  
30 through existing knowledge (Allameh, 2018).  
31

32  
33 Since IC is a valuable tool for firms and can have an influence on most organizational factors,  
34 it has attracted the attention of most firms, managers, and scholars and shows why this factor  
35 is essential for organizations (Hamdan, Buallay and Alareeni 2017; Lee & Lin 2019; Dabic et  
36 al. 2019). IC is also the most important strategic asset in evaluating a firm's performance in  
37 developed and developing countries, and it is confirmed by most researchers (Khalique et al.,  
38 2011; Amrizah & Rashidah, 2013; Ngah & Ibrahim, 2012). Skandia Insurance Company  
39 considers IC's knowledge, practical experience, customer relationship, organizational  
40 technology, and professional skills to improve its competitive advantage (Sofie, 1999; Xu and  
41 Wang, 2019). IC is a commercial asset that has become a necessary resource and a significant  
42 competitive advantage (Rodrigues, Tejedo Romero & Craig, 2017).  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Prior scholars suggest several components for IC comprising human capital, structural capital and relational capital (Bontis et al., 2000; Ahmed et al., 2022; Kusi-Sarpong et al., 2022; Aljuboori et al., 2022). Initially, human capital is defined according to individuals' skills, knowledge, ability, and experiences to generate wealth and resolve entities' problems. However, maintaining or keeping the human capital investment is difficult for managers as staff are the principal owners of human capital, not the organizations. Additionally, the SC, referring to formulated structures and processes in organizations, are applicable to increase the value through efficient use of expertise. In contrast to human capital, organizations are the primary possessors of SC, which their employees generate. Structural capital is all an organization's knowledge, including charts, databases, designed strategies, created trends, guidelines, processes and other similar things (Bontis et al., 2000). It is suggested that structural capital is permanently willing to generate competitive advantage for firms through investing in IT infrastructures and R&D. Finally, relational capital (also known as customer capital) is explained in IC literature. The central role of relational capital in value generation implies the used knowledge in merchandising and trading venues of organizations and their incorporation with their customers and external related parties. Salehi and Farzaneh (2018) believe that organizational connections might be established from different channels, such as making mutual knowledge with other entities and connecting with other families or related personal, family investment and partnership contracts. In a knowledge-based economy, intellectual capital is crucial to a company's growth and competitive advantage (Holland, 2003). As the competition grows, intangible assets become more important. Thus, ignoring them increases their weaknesses and reduces the investors' trust.

### **2.3. Social Capital**

Over the last few decades, economists and other social scientists have paid increased attention to social capital and its link to economic performance (Calcagnini and Perugini, 2018; Tipu and Fantasy, 2018). Following Woolcock (2001), social capital is defined as the networks and norms optimizing the collective process. It is believed that such a definition is comprehensive (Jha, 2017) since it encompasses the broad consensus in social capital literature. In other words, the areas with greater social capital levels are characterized by a higher perception of obligations and mutual trust, and regions with wider networks and further norms correlate (Jha, 2017). Guiso et al. (2004) explain social capital as the degree of mutual trust and altruistic activities in a given society. Fukuyama (1997) also disputes social capital as '*the existence of a certain set of informal values or norms shared among members of a group that permits cooperation among them*'. Portes (1998) defines social capital as the individual's tendency to



1  
2  
3 accept social norms over generations and considers themselves obligated to act according to  
4 the accepted norms. The core theme of provided definitions possesses a common essence  
5 arguing that individuals in a given region characterized by greater social capital are speaking  
6 less selfish and agreed to fulfil their social obligations. Thus, in this study, social capital refers  
7 to the situation in which individuals are willing to share their information, following the  
8 designed obligations and likely cooperating. Social capital transforms a business  
9 with efficiency into an innovation-driven business and a business with innovation, which may  
10 also provide competitive advantages for the organization (Lauzikas and Dailydaite, 2015).  
11 Social capital refers to institutions, relations, and norms and forms the quantity and quality of  
12 social interaction. Social capital also improves society and the economy (Grootaert and  
13 Bastelaer, 2001). Turkina and Thai (2013) suggest that social capital improves innovational  
14 performance and increases knowledge and organizational learning through trust and  
15 collaboration.

16 Organizations must evaluate their products and services steadily, market margin compared to  
17 other organizations and emerging issues to survive in the rapidly evolving environment  
18 (Sozbilir, 2018). Creativity and confidence are the main elements in such a situation (Cankar,  
19 2013; Manzoor, 2014). Suebvises (2018) concluded that social networks are the main parts of  
20 social capital. They improve the effectiveness of public goods provision and Thai citizens'  
21 motivation to participate in public affairs. Public sector accountability is often weak in  
22 Thailand, so social capital and the citizens' participation enhance the public sector's  
23 performance and accountability. Companies with higher social capital pay lower audit fees (Jha  
24 and Chen, 2015). These companies provide financial reports with more top qualities and have  
25 fewer chances for fraud than those headquartered in lower social capital (Jha,  
26 2019). Companies with high social capital perform better in times of financial crisis (Lins,  
27 Servaes and Tamago, 2017). This positive effect on the performance of small and medium  
28 enterprises has also been observed (Olamid and Ogbichi, 2021).

#### 29 ***2.4. The relationship between intellectual capital and the weaknesses of internal control***

30 Among provided theories in accounting literature, we assume that the resource-based view  
31 (RBV) (Barney, 1991) and dynamic capabilities theory (DCT) (Teece et al., 1997) are the most  
32 applicable frameworks in explaining the association between IC and internal control  
33 weaknesses. Firstly, RBV, concentrating on firms' strategic resources, may assist them in  
34 creating a sustainable competitive advantage. Under such a viewpoint, strong internal controls  
35 might be counted as a competitive advantage (Jokipii, 2009). The IC may play an active role  
36 in establishing a strong internal control mechanism for achieving the desired competitive  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 advantage. Furthermore, Barney (1991) believes that firms with rare, peculiar and inimitable  
4 resources can perform efficiently, including establishing appropriate internal controls.  
5  
6 Therefore, RBV suggests that firms mainly concentrate on their domestic resources comprising  
7 intangible resources (such as IC) and physical capital (Kaawaase et al., 2019) rather than  
8 external opportunities. Secondly, the DCT concept is developed to ensure organizations'  
9 success through effectively and efficiently applying their resources in a dynamic business  
10 environment (Teece et al., 1997). The turbulent and dynamic environments require  
11 organizations to adopt new strategies and alter their potential resources to create or maintain  
12 their competitive advantages (for example, strong internal controls), which requires greater IC  
13 resources. Therefore, RBV and DCT might be considered complementary mechanisms arguing  
14 that organizations are expected to respond to environmental changes by monitoring these  
15 changes in the vibe and making snap changes by using IC components to strengthen their  
16 capabilities in the competitive markets (Teece, 2007). Kabuye et al. (2021), examining the role  
17 of IC and isomorphic forces in strengthening internal controls over financial reporting, show  
18 that both intellectual capital and isomorphic pressures positively and significantly contribute  
19 to the strength of internal controls. Oradi et al. (2019) argue that CEOs' financial expertise (as  
20 the HC of firms) may meaningfully decline internal control weaknesses. Bananuka et al. (2019)  
21 document a significant positive relationship between IC and adopting IFRS in Uganda.  
22 Additionally, Salehi et al. (2020) propose that high ability managers are likely to explain the  
23 investment decision making process.

24  
25 According to Chen, Smith, Cao & Xia (2014), intellectual capital in a firm's IT capability has  
26 the additional benefits of supporting internal controls' functioning and the audit process's  
27 efficiency. Similarly, Choi, Lee & Sonu (2013) indicate that human resource investment  
28 determines the strength of a firm's ICFR over financial reporting (Le et al., 2020; Choi et al.,  
29 2013). Contrarily, there is limited evidence on the effect of management assessments on  
30 internal control quality (Schroeder and Shepardson, 2016). Nonetheless, employee treatment  
31 policies influenced the integrity of internal control and financial reporting (Guo et al., 2016).  
32 From the literature, we find mixed and inconsistent opinions on the influence of intellectual  
33 capital on ICFR. Yet, scholars such as Bananuka et al. (2019) found intellectual capital's  
34 significant and positive contribution to adopting IFRSs in Uganda's MFIs.

35  
36 Studies confirm employees' critical role in guaranteeing internal controls' efficiency in  
37 financial reporting (Guo et al., 2016; Choi et al., 2013). The employees' maladroitness accounts  
38 for almost 50 percent of internal controls (Guo et al., 2016). Companies with skilled employees  
39 have fewer weaknesses in internal controls and less restatement. According to the above, there  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 is a significant relationship between employees and their abilities as intellectual capital and  
4 internal controls' weakness. Companies and their employees improve their internal controls.  
5 Knowledgeable intellectual capital and its comprehensive management strengthen internal  
6 controls. Companies implement intellectual capital to minimize the weaknesses of internal  
7 controls. Gao et al. (2020) believe that human capital, as one of the components of intellectual  
8 capital, plays an essential role in implementing accounting information systems. Human capital  
9 is one of the most critical mental resources that creates the most effectiveness and efficiency  
10 and has the greatest impact on company performance Yao et al., 2019). Kehelwalatenna (2016)  
11 shows that intellectual capital has a controversial effect on firms' performance during financial  
12 crises despite theoretical expectations. This behavior is because human capital fails to provide  
13 the necessary value for the sample firms. The essential components of intellectual capital are  
14 closely correlated (Dabic et al., 2019; Zhang et al., 2018). They incorporate culture, innovation,  
15 and the organizational environment. Higher economic performance is positively related to  
16 higher intellectual capital and innovation culture. Kengatharan (2019) confirms this by  
17 demonstrating a strong relationship between intellectual capital and efficiency and a positive  
18 correlation between efficiency and firm performance. Other studies (Hashim, Osman, and  
19 Alhabshi, 2015; Meles et al., 2016; Handzic et al., 2016; Hamdan, Buallay and Alareeni, 2017;  
20 Buallay, 2018; Ibarra Cisneros and Hernandez-Perlines, 2018; Sardo and Serrasqueiro, 2018  
21 Lee and Lin, 2019; Chatterjee, 2022; Aljuboori et al., 2022) approve the positive relationship  
22 between intellectual capital and its components and firm value and performance. Designing an  
23 effective internal control system enhances financial performance and decreases fraud (Ibrahim,  
24 Diibuzie, Abubakari, 2017). Salehi et al. (2022) and Lotfi, Salehi and Lari Dashtbayaz (2021)  
25 found that increasing and improving intellectual capital decreased the likelihood of fraud.  
26 So, we expect an increase in intellectual capital to improve internal controls' efficiency and  
27 reduce weaknesses.

28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46 In the Islamic context, scholars have attempted to identify the role of IC and social capital in  
47 improving the performance and management of institutions. In this regard, Laallam et al.  
48 (2020) argue the importance of IC in the performance of waqf institutions. Their paper provides  
49 a platform to understand the potential obstacles and challenges in waqf institutions (such as  
50 lack of accountability, lack of funding, mismanagement and lack of trained labour, among  
51 others) and offers potential solutions through the consideration of knowledge and IC. It is  
52 discussed that understanding the prominence of having highly capable and talented employees  
53 with various expertise and mastering might be the mainstream for enhancing Islamic  
54 institutions. Therefore, the HC might be counted as the main element of organizational success  
55  
56  
57  
58  
59  
60

1  
2  
3 in operational performance and internal controls. Initially, Islamic institutions are expected to  
4 create and promote an atmosphere attracting and maintains talented staff by implementing a  
5 strategy to improve their performance quality; employing energetic and skilled workers may  
6 strengthen the diverse organizational dimensions. Such a strategy may also optimize the  
7 decision-making processes in line with the interest of the Islamic institutions and community.  
8 Alternatively, it might be beneficial to preclude the loss of knowledgeable workers by  
9 unnecessary turnover and showing restricted behaviour toward them (Liebowitz, 2006, 2016).

10  
11  
12  
13  
14  
15  
16 Furthermore, considering the prominence of SC may encourage Islamic institutions to invest  
17 heavily in IT, advanced and innovative infrastructure, security and databases, manuals and the  
18 system of operating, etc. For instance, using an effective IT-based system inside an Islamic  
19 institution may optimize the work process of the employees, and improve communication  
20 talents and group-working and learning, resulting in enhanced performance of the affiliated  
21 sectors quickly and at a minimal expense (leading cost and time effectiveness). Moreover,  
22 establishing a fluent and secure infrastructure may improve the working environment in the  
23 institutions and, consequently, stronger internal controls. Ali et al. (2022) indicate that green  
24 human capital, structural capital and relational capital significantly influenced Islamic banks'  
25 human resource (HR) management. Moreover, the outcomes of their paper recommend that  
26 Islamic bank HR managers and top management should strengthen green HR management  
27 policies. The Islamic bank HR department should also consider bank intellectual capital and  
28 employee social identity while making environment-friendly policies.

29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40 Further investigations also support the significant role of IC in business and internal control  
41 improvements. Budhi and Hakim (2020) find that green human capital, structural capital, and  
42 relational capital significantly impact the competitive advantage of small and medium  
43 enterprises. Furthermore, Islamic business ethics only moderate the relationship between green  
44 human capital and competitive advantage. In addition, corporate investment in green  
45 intellectual capital is not only demanded by regulation, environmentalists, consumers,  
46 competition and the government but also improves the competitive advantage of small and  
47 medium enterprises. Stronger corporate governance and improved internal controls may justify  
48 such associations. The Key results of Belal et al. (2019) show a significant increase in  
49 intellectual capital reporting over time, the dominance of internal capital-related items in the  
50 intellectual capital reporting profile and the dynamics of changes in intellectual capital  
51 reporting practices over time. Through an institutional theory lens, we explain that this is due  
52  
53  
54  
55  
56  
57  
58  
59  
60

to the changes in the external institutional environment and various intra-organisational factors such as strong ethical culture, unique knowledge base (Sharia), and corporate governance regime. Yong et al. (2022) report that green human capital and relational capital positively influence green human resource management (HRM). In addition, green HRM is positively related to social, environmental and economic performance. Besides, green HRM positively mediates the relationships between green human capital and economic, social and environmental performance. Finally, green relational capital improves sustainability (economic, environmental, and social performance) mediated by green HRM. Karbaila et al. (2022) reveal that intellectual capital positively impacts the Maqashid Shariah Performance of Islamic banks in Indonesia; this indicates that greater utilization of intellectual capital leads to an increase in the Maqashid Shariah Performance.

According to the mentioned theoretical framework and literature reviews, the first hypothesis is as follows:

H1: Intellectual capital and internal control weakness have a significant negative relationship.

### ***2.5. The relationship between social capital and the weakness of internal controls***

Social capital allows organizations to transfer knowledge and information through relationships, enhancing individuals' abilities, competencies and skills, which benefits organizations (Burt, 1997). Under this approach, the mainstream social capital theory suggests that practitioners will likely extend their social connections to enhance performance. In this sense, Johansen and Pettersson's (2013) board coworkers might be considered a 'trustee source' for sharing information. For instance, the information sharing with external bodies may enable audit committees' members, who are accountable for the establishment of powerful internal controls, to gain further details from other firms' accounting and corporate governance practices (Reppenhagen 2010) in a timely way (Burt 1992, Horton et al. 2012). Consequently, the devastating social ties may provide a firm with effective corporate governance structures and internal controls through efficient information transferring and learning from social networks, which might not be observable in other manners (Kim 2005, Stuart and Yim 2010). In addition, audit committee or board of director members who are engaged in the operation of several firms are exposed to a broader accounting, corporate governance and strategic manners (Vafeas, 1999, Kor and Sundaramurthy, 2009), which in turn enables them to internalize the processes and transfer their valuable experiences across their social ties (Useem 1984; Beckham and Haunschild, 2002). In the context of interrelationships and open collaboration, it is argued that social networks are likely to strengthen internal controls and the quality of

1  
2  
3 financial reports (Hoitash, 2011). Salehi et al. (2019) argue that environmental issues, such as  
4 the regional financial crisis, may also explain the quality of audited financial reports.  
5 Collectively, it is observed that the critical opportunity proposed by social capital might be  
6 knowledge creation and transference across the social networks by individual employees of  
7 organizations.  
8  
9

10  
11 The lack of qualified accounting and technical expertise personnel often contributes  
12 inefficiently to the effect of internal controls on financial reporting (Gao et al., 2020). Studies  
13 indicate that material weaknesses are related to firms with incompetent personnel (Choi et al.,  
14 2013; Doyle, Ge, and Mcvay, 2007). There is a significant relationship between the factors and  
15 their impact on business and the final value in a knowledge-based economy (Unerman and  
16 Guthrie, 2008). Firms grow by employing talented and innovative staff. Improving staff  
17 knowledge and efficiencies also enhances the employees' and managers' trust and  
18 collaboration. This, in turn, improves the weakness of internal controls. Guo et al. (2016) show  
19 that companies with employee-friendly policies have fewer weaknesses in internal controls.  
20  
21

22 Organizations seek to improve their staff's confidence and creativity (Foster and Kaplan.,  
23 2011). Social capital affects organizational creativity, and this creativity affects organizational  
24 efficiency (Sozibilir, 2018). A creative organization's primary income source is new products  
25 to overcome problems (Andriopoulos, 2000). These organizations inspire employees to  
26 participate in creative processes and provide novel ideas distinct from current products (Jaussi  
27 and Randel, 2014). Perry-Smith (2006) found that weak associations in social networks  
28 decrease creativity, and better interaction among employees increases (Hsu and Fan, 2010;  
29 Hunter, Bedell and Mumford, 2007). The positive impact of an employee's quality on internal  
30 controls' efficiency is higher in companies with better external monitoring (Liu, Lin, and Shu,  
31 2017). Corporate social responsibility enhances financial performance, reduces asymmetric  
32 information, develops access to financial resources, and improves internal controls (Kim, Kim,  
33 and Kim, 2017). Also, Salehi et al. (2022) found a significant negative relationship between  
34 social capital and financial statement fraud. Wang et al. (2018), assessing the impact of  
35 mandatory corporate social responsibility reporting on firms' financial reporting quality, find  
36 that mandatory corporate social responsibility disclosure firms constrain earnings management  
37 after the policy. They argue that mandatory corporate social responsibility disclosure mitigates  
38 information asymmetry by improving financial reporting quality. Darlene (2018) believes that  
39 social capital should be considered the sixth rationale for board diversity; social capital serves  
40 a role in governance and rises to the standard of other rationales for board diversity. Habib and  
41 Mostafa (2017) document that firms from a high social capital county hold significantly less  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 cash than firms from a low social capital county. They also show that social capital reduces  
4 cash holdings via the financial constraints and financial reporting quality channels while it  
5 increases cash holdings via the systematic and idiosyncratic risk channels. Additional analysis  
6 reveals that the effect of social capital on cash holdings is more pronounced for less  
7 geographically dispersed firms.  
8  
9

10  
11  
12 Juan et al. (2022) find a negative association between social capital and earnings management.  
13 Meaning managers of small and medium firms headquartered in regions of higher social capital  
14 are less likely to manage reported earnings. Their findings imply the effective role of social  
15 capital in strengthening internal controls. Abed et al. (2022) show the significant impacts of  
16 corporate social responsibility in moderating the relationship between the determinants of  
17 creative accounting and the financial reporting quality of banks towards competitive  
18 advantages. Avishek et al. (2022) document that collaboration- (competition-) oriented culture  
19 firms have lower (higher) financial reporting quality, and these effects are incremental to  
20 corporate governance and tone at the top. Further analyses support our main findings and  
21 suggest that collaboration culture is associated with the likelihood of reporting a material  
22 internal control weakness, while competition culture is related to a lower likelihood of an  
23 internal control weakness and a restatement. Ho et al. (2022) reveal that banks with stronger  
24 engagements and interests in the business-related CSR domain experience higher profitability,  
25 while those more committed to the corporate governance and charity-related domains create  
26 larger social contributions. Banks tend to incur higher CSR spending when more active in  
27 corporate governance. Although the stock market reacts positively to CSR expenditures, the  
28 reaction is less favorable for banks with CSR expenditures above the industry norm.  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39

40  
41 Considering the above discussions, we expect that improved social capital may reduce the  
42 weaknesses of internal controls. According to the mentioned research foundations and  
43 literature reviews, the second hypothesis is developed as follows:  
44  
45

46 **H2:** Social capital and internal control weaknesses have a significant negative relationship.  
47  
48  
49

50 **Insert Figure 1 here**  
51  
52

### 53 **3. Research methodology**

54  
55 This study is practical regarding the purpose and correlational regarding the information  
56 analysis. The research's statistical population includes all listed companies on the Tehran Stock  
57 Exchange from 2014 to 2020. The following table demonstrates the criteria for choosing the  
58  
59  
60

sample data. After applying restrictions, the statistical sample of 187 companies listed on the TSE was determined.

**Insert Table 1 here**

### **3.1. Data Collection Methods and Instruments**

The data were collected from the following. The resources include RahavardNovin Software, financial statements, notes to the financial statements, general assembly minutes, disclosed reports of internal controls' weaknesses, and independent audit reports from the Codal Website. The Stata-Test was used to analyze the data.

### **3.2. Data analysis method**

The F-Limer test is used to estimate the panel model. The Hausman test is used to identify the random effects of fixed effects. Multivariate Regression, Least Square Regression, and Fixed Effects regression test the research hypotheses. The Kolmogorov-Smirnov test for normality of the data, the Collinearity, and sensitivity analysis is also applied.

### **3.3. The research model**

$$CI = \alpha_0 + \alpha_1 INCAP + \alpha_2 SOC + \alpha_3 AIS + \alpha_4 BSF + \alpha_5 BSI + \alpha_6 AGE + \alpha_7 SIZE + \alpha_8 LEV + \alpha_9 ROA + \alpha_{10} LOSS + \alpha_{11} MTB + \alpha_{12} BLND + \alpha_{13} BE + \alpha_{14} BUSY + \alpha_{15} INDUSTRY + \alpha_{16} YEAR + \varepsilon_0$$

#### **Dependent variable:**

The audit report used the three variables of internal financial control weakness, non-financial weakness and information technology to measure the internal control weakness (Salehi, Rajaei and Edalati Shakib, 2021).

#### **Independent variable:**

Pulic's (2000; 2004) models have been used to measure intellectual capital, the method of which is fully described in the appendix.

**Insert Table 2 here**

To measure our social capital, the Legatum Prosperity Index has been used, published annually by the Legatum Research Institute (Salehi et al., 2022). The Legatum Institute reports its specific annual index, which declares prosperity over countries measured by wealth and life satisfaction criteria. The employed criteria by Legatum are economic quality, business environment, governance, education, health, safety & security, personal freedom, social capital and natural environment. One of them is the social capital ranking used in this paper.

#### **Control variables**



1  
2  
3 In the present study, according to Salehi, Rajaei and Adalati Shakib (2021); Salehi and  
4 Ghasempour (2021); Oradi, Asian and Rezaei (2019), BSF variables. BSI, AGE, SIZE, LEV,  
5 ROA, LOSS, MTB, BLND, BE, BUSY) control variables.

6  
7  
8 Doyle, Jay & McVeigh (2007) showed that smaller, younger and less profitable companies  
9 have more internal control weaknesses. Companies with weak internal control systems have  
10 higher losses and lower ROAs (Ghosh and Lee, 2013). In contrast, Oussii and Boulila Taktak  
11 (2018) showed that larger companies are usually more likely to have problems with the internal  
12 control system due to the complexity of operations and wider scope. In addition, firms with  
13 strong corporate governance are less likely to have problems with the internal control system.  
14 The number of board and audit committee meetings reflects the board's efforts to identify and  
15 address weaknesses in the internal control system. Audit committee and board structure affect  
16 the quality of internal control systems (Hoitash, Hoitash and Bedard, 2009) and companies  
17 with independent boards encounter less internal control weakness (Chen et al., 2017b).

#### 25 **4. Data analysis**

##### 26 **4.1. Descriptive statistics**

27  
28  
29 **Insert table 3 here**

30  
31 According to the descriptive statistic in Table 2, it is observed that about 23 percent of the  
32 organizations have weaknesses in their internal controls. To measure this weakness, the  
33 following were used. The variables are IT weaknesses and financial and non-financial  
34 weaknesses. The maximum and minimum (its factor variable includes human capital, structural  
35 capital and customer capital) of intellectual capital are 5,782 and -5,314. The maximum and  
36 minimum amounts of social capital are 121 and 55. This variable's occurrences are less than  
37 other variables due to lack of disclosure and lack of access to the (BSI) board specialization  
38 industry variable.

##### 39 **4.2. The results of the unit root test of variables**

40  
41 The stationary of variables is one of the essential features of data. The stationary of variables  
42 avoids false regression between the variables. Their stationary status must be determined before  
43 model evaluation to ensure data are not fabricated. The Hadri Test is used for this purpose.  
44 According to Appendix 1, the unit root for all the variables is stationary.

##### 45 **4.3. Kolmogorov test results**

46  
47 The Kolmogorov test is used to determine the data normality. We test the null hypothesis H0  
48 at the error level of 5 percentage percent. If the test statistic is greater than or equal to 5 percent,  
49 there is no reason to reject the H0, and the data are normal. The results are reported in Appendix  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60 2.

#### 4.4. *Collinearity test*

The variance inflation factor test is used to assess the multicollinearity issue. The results in Appendix 3 show that variables are not suffering from the multicollinearity problem since the results are less than 10.

#### 4.5. *Sensitivity test*

The sensitivity analysis is applied to figure out the direct association between variables regardless of the regression model, in which the affiliated results are reported in Appendix 4.

#### 4.6. *Regression tests*

**Insert Table 4 here**

**Insert Table 5 here**

**Insert Table 6 here**

**Insert Table 7 here**

The hypothesis test results in Table 4 show a negative and significant relationship between intellectual capital and social capital. The p-value for each is 0,001 and 0,018, lower than 0.05. The variable coefficients are  $-0,027$  and  $0,000$ , indicating an indirect relationship between intellectual capital, social capital, and internal control weaknesses. Because the variable coefficient for intellectual and social capital is  $-0.020$  and  $0.002$  at the significance level of 90 percent. Table 7 shows a reduction in internal control weaknesses because the intellectual and social capital significance level is lower than 0.05, with 0.024. The variables coefficient is  $-0.165$  and  $0.036$ , indicating an inverse relationship between variables and internal control weaknesses in the next year.

#### 4.7. *further findings*

**Insert Table 8 here**

**Insert Table 9 here**

**Insert Table 10 here**

**Insert Table 11 here**

Table 8 shows a significant and inverse relationship between the variables and the non-financial weaknesses in internal controls. Its significance level is less than 5 percent and is 0,005. According to the regression, the independent variable coefficient is  $-0.014$  and  $0,058$ . Tables 9 and 10 confirm the Last Square and fixed-effects regression results. The variable coefficient of intellectual and social capital in the last square regression and fixed effects are, respectively,  $-0.007$ ,  $-0.018$ ,  $-0.001$ , and  $-0.009$ . The p-value for each is less than 5 percent and is 0.004, 0.002, 0.004, and 0.025. Other study results denote an inverse and negative relationship

1  
2  
3 between the intellectual capital and social capital and the non-financial weaknesses of internal  
4 control for the upcoming year of the organizations and confirm the results of Table 11.

5  
6 **Insert Table 12 here**

7  
8 **Insert Table 13 here**

9  
10 **Insert Table 14 here**

11  
12 **Insert Table 15 here**

13  
14 Table 12 demonstrates that, as expected, there is a significant and negative relationship between  
15 the IT weaknesses of internal control and intellectual and social capital. The p-value is 0.000  
16 and lower than 0.05. The p-value of the mentioned variables in the least square regression and  
17 fixed effects in Tables 13 and 14 confirms this relationship. Their p-value is 0.000 and 0.018,  
18 and the variable coefficient is -0.018 and -0.0522. Their variable coefficient is - 0.010 and  
19 0.093. The T+1 regression results in Table 18 denote that improving social and intellectual  
20 capital reduces the weakness of internal controls related to computers in the coming year. The  
21 variable coefficient for intellectual and social capital is -0.010 and -0.099, with a p-value of  
22 0.006 and 0.00 in Table 15.

23  
24 **Insert Table 16 here**

25  
26 **Insert Table 17 here**

27  
28 **Insert Table 18 here**

29  
30 **Insert Table 19 here**

31  
32 Table 16 demonstrates the main regression results. It denotes an indirect and significant  
33 relationship between the financial weaknesses of internal control, intellectual capital, and social  
34 capital. Their p-value is 0.005 and 0.000, which is lower than 0.05 percent. The coefficient for  
35 each is -0.058 and -0.002, confirming the above relationship. The fixed-effects regression and  
36 the last square tests are conducted to ensure the results. Their results in Tables 17 and 18  
37 establish the mentioned relationship. As shown in Table 19, the variables' analysis shows that  
38 enhancing intellectual and social capital quality reduces internal controls' financial weaknesses  
39 in the coming year. Their p-value is 0.002 and 0.003, respectively, less than the significance  
40 level of five percent. The variable coefficient is -0.055 and -0.002, confirming the inverse  
41 relationship.

## 55 **5. Discussion**

56  
57 The internal control system's inability to provide adequate supervision would lead to  
58 inefficiency, a decline in investors' and beneficiaries' trust and increased dissatisfaction,  
59 causing the firm's low valuation from the market's side (Hammersley, Myers & Shakespeare,  
60

2008). One factor contributing to internal control weakness and, subsequently, the quality of internal controls is firms' intellectual capital. Several studies also showed that inefficient internal controls mainly relate to personnel (Doyle, Ge and McVay, 2007). Moreover, Choi et al. (2013) and Gao et al. (2020) believe that inefficient internal controls are related to a lack of experienced personnel in the accounting, sufficient technical expertise, and disqualification. According to these factors, firms are searching for competent accountants and analytical staff who have perseverance and innovative thoughts, humanitarian relations, and transfer confidence to others to elevate internal controls' efficiency and cause the decline of weakness in internal controls. The first hypothesis results align with Guo et al. (2016), who indicate that high-quality firms do not have severe internal control weaknesses. The results of Gao et al. (2020) conform with Liu, Lin, and Shu (2017) declare that staff quality can improve the effectiveness of internal controls of firms and that the positive impact of staff quality on internal control effectiveness in firms with external supervision is more than other firms.

## 6. Conclusion

The study's first hypothesis results show a negative and significant relationship between intellectual capital and internal control weaknesses, which means the presence of more experienced and skilled intellectual capital in the firms leads to the decline of internal control weaknesses. According to the RBV, more intellectually skilled human resources are willing to benefit organizations with competitive advantages. Strong internal controls might be counted as an effective competitive advantage. Moreover, the DCT suggests that in changeable current business environments, acquiring sufficient knowledge and adequate internal infrastructures is critical in showing quick and suitable responses to the dynamic nature of markets. Thus, having talented, skillful, knowledgeable and experienced human resources will likely reduce internal control weaknesses.

As for the second hypothesis, it is believed that there is a negative and significant relationship between social capital and internal control weakness, which means the higher the social capital of firms, the less the weakness in internal controls. As discussed earlier, it is expected that the wider social ties may provide organizations with the opportunity of gaining further knowledge from employees who are working in several companies and are likely to experience more, as well as transferring the knowledge that is already generated in other companies located in the region of social connection. Therefore, more social capital is likely to benefit companies in tackling internal control weaknesses by generating and transferring knowledge to the organizations. Further, the study's findings show increased quality and intellectual improvement by analyzing intellectual capital's and social capital's effects on internal control

1  
2  
3 components. Social capital in organizations will lead to declining organizational internal  
4 control weaknesses. In the upcoming years, we will witness intellectual and social capital's  
5 effectiveness and positive effect on reducing internal control weaknesses.  
6  
7

8 According to the findings of this paper, some contributions are recommendable for investors,  
9 managers and policymakers. Investors might benefit from improving the IC and social capital  
10 as two crucial intangible assets for organizational success. In particular, investment in these  
11 two critical factors, prominently in the knowledge-based economies, is willing to compensate  
12 its potential costs in current and subsequent years through the strength of internal control  
13 weaknesses. To make it more apparent, employing highly skilled staff, improving workers'  
14 knowledge and implementing fluent and secure structures and processes will likely benefit the  
15 organizations through stronger internal controls. Also, such an effect might be more  
16 pronounced in Islamic societies by Islam's teachings promoting social interactions,  
17 cooperation and knowledge sharing to expand social justice. Bataineh et al. (2022) argue that  
18 intellectual capital efficiency, particularly human capital, is a critical factor enabling firms to  
19 achieve higher financial performance and market value. In a more detailed context, Laallam et  
20 al. (2022) show that human capital, structural capital and spiritual capital play an allocative  
21 role in determining the success of waqf institutions in Algeria. Moreover, managers are aware  
22 that increasing their social ties and connections might also be counted as an advantage for them  
23 against the principals since the principals are known that managers having further social  
24 connections are likely to have more valuable experiences and further knowledge resources to  
25 transfer into the organizations, both of which are applicable in the reduction of internal control  
26 weaknesses. In other words, managers and board members are aware that the built social  
27 reputation among the Islamic communities in Iran may significantly assist them in receiving  
28 the latest knowledge of their industrial domain, which might be applicable to improve internal  
29 controls. In other words, it is expected that the strong internal controls might be considered a  
30 result of Islamic communities' requirements from the companies and their managers.  
31  
32

33 Furthermore, policymakers can improve the efficiency of financial markets by recommending  
34 facilities for companies, such as investment in intangible assets and IC components. They may  
35 recompense some of the costs of IC investments to reduce the potential risks of such long-run  
36 viewpoints. In particular, enforcement of disclosing the IC performance and collecting and  
37 maintaining the social capital databases might be among the beneficial strategies that  
38 policymakers may use to improve internal controls and market efficiency. Finally,  
39 macroeconomic analysts may also achieve better predictions regarding the provided high-  
40 quality financial reports under strong internal control mechanisms (Salehi et al., 2021);  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Daemigah, 2020). The high-quality prepared financial reports, as a result of investment in IC and social capital, are expected to assist the government in receiving accurate and reliable information regarding the financial markets.

## References

Abbaszadeh, M., Salehi, M. and Faiz, S. (2019), "Association of information technology and internal controls of Iranian state agencies", *International Journal of Law and Management*, Vol. 61 No. 1, pp. 133-150. <https://doi.org/10.1108/IJLMA-12-2017-0304>.

Abed, Ibtihal A., Nazimah Hussin, Hossam Haddad, Nidal Mahmoud Al-Ramahi, and Mostafa A. Ali. (2022) "The Moderating Effects of Corporate Social Responsibility on the Relationship between Creative Accounting Determinants and Financial Reporting Quality" *Sustainability*, Vol. 14, No. 3: 1195. <https://doi.org/10.3390/su14031195>.

Adler, P.S. and Kwon, S.W., (2002). Social capital: prospects for a new concept. *Academy of Management Review*, Vol. 27, No. 1, pp. 17–40.

Ahmed, A., Bhatti, S. H., Gölgeci, I. and Arslan, A. (2022), "Digital platform capability and organizational agility of emerging market manufacturing SMEs: The mediating role of intellectual capital and the moderating role of environmental dynamism", *Technological Forecasting and Social Change*, Vol. 177 No. 10. A. 121513. <https://doi.org/10.1016/j.techfore.2022.121513>.

Ali, M., Puah, C.-H., Ali, A., Raza, S.A. and Ayob, N. (2022), "Green intellectual capital, green HRM and green social identity toward sustainable environment: a new integrated framework for Islamic banks", *International Journal of Manpower*, Vol. 43 No. 3, pp. 614-638.

Aljuboori, Z. M., Singh, H., Haddad, H., Al-Ramahi, N. M. and Ali, M. A. (2022), "Intellectual Capital and Firm Performance Correlation: The Mediation Role of Innovation Capability in Malaysian Manufacturing SMEs Perspective", *Sustainability*, Vol. 14 No.1. pp. 1-27.. <https://doi.org/10.3390/su14010154>.

Allameh, S.M. (2018), "Antecedents and consequences of intellectual capital: the role of social capital, knowledge sharing and innovation", *Journal of Intellectual Capital*, Vol. 19 No. 5, pp. 858-874. <https://doi.org/10.1108/JIC-05-2017-0068>.

Altamuro, J., and Beatty, A. (2010), "How does internal control regulation affect financial reporting?", *Journal of Accounting and Economics*, Vol. 49 No. 1-2, pp. 58-74. <https://doi.org/10.1016/j.jacceco.2009.07.002>.

American Institute of Certified Public Accountants (AICPA). (2001). "The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit".

Amrizah, K. and Rashidah, A.R. (2013), "Intellectual Capital Profiles : Empirical Evidence of Malaysian Companies", *International Review of Business Research Papers*, Vol. 9 No.6, pp. 83-101.

Andriopoulos, C.A. (2000), "Mind stretching: a grounded theory for enhancing organizational creativity", *Doctoral Thesis, University of Strathclyde, Department of Marketing, Glasgow, Scotland*. <https://doi.org/10.48730/a73r-5w10>.

- 1  
2  
3 Ashbaugh-Skaife, H., Collins, D. W., and Kinney Jr, W. R. (2007), "The discovery and  
4 reporting of internal control deficiencies prior to SOX-mandated audits", *Journal of accounting*  
5 *and economics*, Vol. 44 No 1-2, pp. 166-192. <https://doi.org/10.1016/j.jacceco.2006.10.001>.
- 6 Avishek Bhandari, Babak Mammadov, Maya Thevenot, Hamid Vakilzadeh (2022). Corporate  
7 Culture and Financial Reporting Quality. *Accounting Horizons*; 36 (1): 1–  
8 24. <https://doi.org/10.2308/HORIZONS-19-003>.
- 9 Bae, G. S., Choi, S. U., Lamoreaux, P. T. and Lee, J. E. (2021), "Auditors' Fee Premiums and  
10 Low-Quality Internal Controls", *Contemporary Accounting Research*, Vol. 38 No. 1, pp. 586-  
11 620. <https://doi.org/10.1111/1911-3846.12602>.
- 12 Bananuka, J., Tumwebaze, Z., Musimenta, D., & Nuwagaba, P. (2019). "Determinants of  
13 Adoption of International Financial Reporting Standards in Ugandan microfinance  
14 institutions". *African Journal of Economic and Management Studies*, Vol. 10, No. 3, pp. 336–  
15 355. <https://doi.org/10.1108/AJEMS-08-2018-0236>
- 16 Bananuka, J., Tumwebaze, Z., Musimenta, D., & Nuwagaba, P. (2019). "Determinants of  
17 Adoption of International Financial Reporting Standards in Ugandan microfinance  
18 institutions". *African Journal of Economic and Management Studies*, Vol. 10, No. 3, pp. 336–  
19 355. <https://doi.org/10.1108/AJEMS-08-2018-0236>
- 20 Barney, J. (1991). Firm resources and sustained competitive advantage, *Journal of*  
21 *Management*, Vol. 17 No. 1, pp. 99–120.
- 22 Bataineh, H., Abbadi, S.S., Alabood, E. and Alkurdi, A. (2022), "The effect of intellectual  
23 capital on firm performance: the mediating role of family management", *Journal of Islamic*  
24 *Accounting and Business Research*, Vol. 13 No. 5, pp. 845-863.  
25 <https://doi.org/10.1108/JIABR-02-2022-0032>.
- 26 Beckham, C.M. and Haunschild, P.R., (2002). Network learning: the effects of partners'  
27 heterogeneity of experience on corporate acquisitions. *Administrative Science Quarterly*, Vol.  
28 47, No. 1, pp. 92–124.
- 29 Belal, AR, Mazumder, MMM, Ali, M. (2019). Intellectual capital reporting practices in an  
30 Islamic bank: A case study. *Business Ethics: A Eur Rev*. Vol. 28, pp. 206– 220.  
31 <https://doi.org/10.1111/beer.12211>.
- 32 Bontis, N. (2001). Assessing knowledge assets: a review of the models used to measure  
33 intellectual capital, *International Journal of Management Reviews*, Vol. 3, No. 1, pp. 41–60
- 34 Bontis, N., Chua Chong, K. W., & Richardson, S. (2000). "IC and business performance in  
35 Malaysian industries". *Journal of Intellectual Capital*, Vol. 1, No. 1, pp. 85–100. <https://doi.org/10.1108/14691930010324188>
- 36 Bontis, N., Keow, W.C.C., and Richardson, S. (2000), "Intellectual capital and business  
37 performance in Malaysian industries", *Journal of Intellectual Capital*, Vol. 1 No. 1, pp. 85–  
38 100. <https://doi.org/10.1108/14691930010324188>.
- 39 Booth-Bell, D. (2018), "Social capital as a new board diversity rationale for enhanced corporate  
40 governance", *Corporate Governance*, Vol. 18 No. 3, pp. 425-439. <https://doi.org/10.1108/CG-02-2017-0035>.
- 41 Buallay, A. (2018). "Audit committee characteristics: an empirical investigation of the  
42 contribution to intellectual capital efficiency", *Measuring Business Excellence*, Vol. 22 No. 2,  
43 pp. 183-200. <https://doi.org/10.1108/MBE-09-2017-0064>.
- 44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Budhi Cahyono and Abdul Hakim (2020). *Green Intellectual Capital and Competitive Advantage: The Moderating Effect of Islamic Business Ethics*. Proceedings of the 3rd Asia Pacific International Conference of Management and Business Science (AICMBS 2019). DOI: [10.2991/aebmr.k.200410.013](https://doi.org/10.2991/aebmr.k.200410.013) How to use a DOI?

Burt, R.S., (1992). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.

Burt, R.S., (2001). The social capital of structural holes. Pre-print of Chapter 7. In: M.F. Guillén, R. Collins, P. England, and M. Meyer, eds. *New Directions in Economic Sociology*. New York: Russell Sage Foundation, pp. 201–247.

Burt, R.S., (2007). Second-hand brokerage: evidence on the importance of local structure for managers, bankers, and analysts. *Academy of Management Journal*, Vol. 50, No. 1, pp. 119–148.

Calcagnini, G., and Perugini, F. (2018), "Social capital and well-being in the Italian provinces". *Socio-Economic Planning Sciences*, Vol. 68 No. 19, pp. 1-10. A. 100668, <https://doi.org/10.1016/j.seps.2018.11.005>.

Cankar, S.S. (2013), "Private and public sector innovation and the importance of cross-sector collaboration", *The Journal of Applied Business Research*, Vol. 29 No. 6, pp. 1596–1606. <https://doi.org/10.19030/jabr.v29i6.8197>.

Chadwick, C. and Flinchbaugh, C. (2021), "Searching for competitive advantage in the HRM-firm performance relationship", *Academy of Management Perspectives*, Vol. 35 No. 2, pp. 181-207. <https://doi.org/10.5465/amp.2018.0065>.

Chan, K. C., Chen, Y. and Liu, B. (2021), "The linear and non-linear effects of internal control and its five components on corporate innovation: Evidence from Chinese firms using the COSO framework", *European Accounting Review*, Vol. 30 No. 4, pp. 733-765. <https://doi.org/10.1080/09638180.2020.1776626>.

Chang, Y. T., Chen, H., Cheng, R. K., and Chi, W. (2019), "The impact of internal audit attributes on the effectiveness of internal control over operations and compliance", *Journal of Contemporary Accounting & Economics*, Vol. 15 No 1, pp. 1-19. <https://doi.org/10.1016/j.jcae.2018.11.002>.

Chatterjee, S., Chaudhuri, R., Thrassou, A. and Sakka, G. (2022), "Impact of firm's intellectual capital on firm performance: a study of Indian firms and the moderating effects of age and gender", *Journal of Intellectual Capital*, Vol. 23 No. 1, pp. 103-126. <https://doi.org/10.1108/JIC-12-2020-0378>.

Chen, J., Chan, K.C., Dong, W. and Zhang, F. (2017), "Internal control and stock price crash risk: evidence from China", *European Accounting Review*, Vol. 26 No. 1, pp. 125-152. <https://doi.org/10.1080/09638180.2015.1117008>.

Chen, Y., Knechel, W. R., Marisetty, V. B., Truong, C and Veeraraghavan, M. (2017b), "Board independence and internal control weakness: Evidence from SOX 404 disclosures", *AUDITING: A Journal of Practice & Theory*, Vol. 36 No. 2, pp. 45-62. <https://doi.org/10.1080/09638180.2015.1117008>.

Choi, J. H. Choi, S. Hogan, C. E. and Lee, J. (2013), "The effect of human resource investment in internal control on the disclosure of internal control weaknesses", *Auditing: A Journal of Practice & Theory*, Vol. 32 No 4, pp. 169-199. <https://doi.org/10.2308/ajpt-50514>.



- 1  
2  
3 Clarke, M., Seng, D., & Rosalind, H. W. (2011). "Intellectual capital and firm performance in  
4 Australia". *Journal of Intellectual Capital*, Vol. 12, No. 4, pp. 505–530. [https://doi.org/](https://doi.org/10.1108/14691931111181706)  
5 [10.1108/14691931111181706](https://doi.org/10.1108/14691931111181706)  
6  
7 Committee of Sponsoring Organisations of the Treadway Commission (COSO). (2013). The  
8 2013 COSO Framework: Internal Control-Integrated Framework. Jersey City, NJ." 2013.  
9  
10 [Dabić, M., Lažnjak, J. Smallbone, D. and Švarc, J. \(2019\), "Intellectual capital, organizational  
11 climate, innovation culture, and SME performance: Evidence from Croatia", \*Journal of Small  
12 Business and Enterprise Development\*, Vol. 26 No. 4, pp. 522-544.  
13 <https://doi.org/10.1108/JSBED-04-2018-0117>.  
14  
15 Daemigah, Ali \(2020\). Does Financial Statements Information Contribute to Macroeconomic  
16 Indicators? \*Iranian Journal of Accounting, Auditing and Finance\*, Vol. 4, No. 3, pp. 61-79. doi:  
17 \[10.22067/ijaaf.2020.39428\]\(https://doi.org/10.22067/ijaaf.2020.39428\).  
18  
19 Darlene Booth-Bell, \(2018\) "Social capital as a new board diversity rationale for enhanced  
20 corporate governance", \*Corporate Governance, The International Journal of Business in  
21 Society\*, <https://doi.org/10.1108/CG-02-2017-0035>.  
22  
23 Doyle, J., Ge, W. and McVay, S. \(2007\), "Determinants of weaknesses in internal control over  
24 financial reporting", \*Journal of Accounting and Economics\*, Vol. 44 No. 1-2, pp. 193-223.  
25 <https://doi.org/10.1016/j.jacceco.2006.10.003>.  
26  
27 Edvinsson, L., and Malone, M. S. \(1997\), \*Intellectual Capital: Realizing Your Company's True  
28 Value by Finding Its Hidden Brainpower\*. New York: HarperBusiness  
29  
30 \[Edvinsson, L., and Sullivan, P. \\(1996\\). "Developing a model for managing intellectual,  
31 European Management Journal, Vol. 14 No. 4, pp. 356-364  
32  
33 Ettredge, M. L., Li, C. and Sun, L. \\(2006\\), "The impact of SOX Section 404 internal control  
34 quality assessment on audit delay in the SOX era", \\*Auditing: A Journal of Practice & Theory\\*,  
35 Vol. 25 No. 2, pp. 1-23. <https://doi.org/10.2308/aud.2006.25.2.1>.  
36  
37 Feng, M., Li, C., McVay, S.E. and Skaife, H.A. \\(2015\\), "Does ineffective internal control over  
38 financial reporting affect a firm's operations? Evidence from firms' inventory management",  
39 \\*The Accounting Review\\*, Vol. 90 No. 2, pp. 529-557. <https://doi.org/10.2308/accr-50909>.  
40  
41 Foster, R. and Kaplan, S. \\(2001\\), "Creative Destruction: Why companies that are built to last  
42 underperform the market-And how to successfully transform them", Currency. New York. The  
43 USA.  
44  
45 Frank Kabuye, Kassim Alinda, Nicholas Bugambiro & Saphurah Kezaabu \\(2021\\) Intellectual  
46 capital, isomorphic forces and internal controls over financial reporting in Ugandan  
47 microfinance institutions, \\*Cogent Business & Management\\*, Vol. 8, No. 1. DOI:  
48 \\[10.1080/23311975.2021.1944960\\]\\(https://doi.org/10.1080/23311975.2021.1944960\\).  
49  
50 Fukuyama, F. \\(1997\\). Social capital and the modern capitalist economy: Creating a high trust  
51 workplace. \\*Stern Business Magazine\\*, Vol. 4, No. 1, pp. 1–16.  
52  
53 Gao, J., Merkley, K. J. Pacelli, J., and Schroeder, J. H. \\(2020\\), "Internal Control Weaknesses  
54 and the Demand for Financial Skills: Evidence from US Job Postings", \\*Available at SSRN\\*,  
55 \\[3542331\\]\\(https://doi.org/10.2139/ssrn.3542331\\). <http://dx.doi.org/10.2139/ssrn.3542331>.  
56  
57 Ghosh, A., and Lee, Y. G. \\(2013\\), "Financial reporting quality, structural problems and the  
58 informativeness of mandated disclosures on internal controls", \\*Journal of Business Finance &  
59 Accounting\\*, Vol. 40 No. 3-4, pp. 318-349. <https://doi.org/10.1111/jbfa.12015>.  
60\]\(https://doi.org/10.1108/EMJ-04-1996-004\)](https://doi.org/10.1108/JSBED-04-2018-0117)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Ginesti, G., Caldarelli, A. and Zampella, A. (2018), "Exploring the impact of intellectual capital on company reputation and performance", *Journal of Intellectual Capital*, Vol. 19 No. 5, pp. 915-934. <https://doi.org/10.1108/JIC-01-2018-0012>.

Gordon, L.A. and Wilford, A.L. (2012), "An analysis of multiple consecutive years of material weaknesses in internal control", *The Accounting Review*, Vol. 87 No. 6, pp. 2027-2060. <https://doi.org/10.2308/accr-50211>.

Grootaert, C. and Van Bastelaer, T. (2001), "Understanding and measuring social capital: A synthesis of findings and recommendations from the social capital initiative", vol. 24. World Bank, Social Development Family, Environmentally and Socially Sustainable Development Network

Guiso, L., Sapienza, P., & Zingales, L. (2004). Does local financial development matter? *Quarterly Journal of Economics*, Vol. 119, No.3, pp. 929–969.

Guo, J., Huang, P. Zhang, Y. and Zhou, N. (2016), "The effect of employee treatment policies on internal control weaknesses and financial restatements", *The Accounting Review*, Vol. 91 no. 4, pp.1167-1194. <https://doi.org/10.2308/accr-51269>.

Habib Ahsan and Mostafa Monzur Hasan (2017). Social capital and corporate cash holdings, *International Review of Economics and Finance*, Vol. 52, pp. 1–20.

Habib, A. and Bhuiyan, M.B.U. (2011), " Audit firm industry specialization and the audit report lag", *Journal of international accounting, auditing and taxation*, Vol. 20 No. 1, pp. 32-44. <https://doi.org/10.1016/j.intaccaudtax.2010.12.004>.

Hamdan, A.M., Buallay, A.M. and Alareni, B.A. (2017), "The moderating role of corporate governance on the relationship between intellectual capital efficiency and firm's performance: evidence from Saudi Arabia", *International Journal of Learning and Intellectual Capital*, Vol. 14 No. 4, pp. 295-318. <https://doi.org/10.1504/IJLIC.2017.087377>.

Hammersley, J. S., Myers, L. A. and Shakespeare, C. (2008), "Market reactions to the disclosure of internal control weaknesses and to the characteristics of those weaknesses under Section 302 of the Sarbanes Oxley Act of 2002", *Review of Accounting Studies*, Vol. 13 No. 1, pp. 141-165. <https://doi.org/10.1007/s11142-007-9046-z>.

Handzic, M., Durmic, N. Kraljic, A. and Kraljic, T. (2016), "An empirical investigation of the relationship between intellectual capital and project success", *Journal of Intellectual Capital*, Vol. 17 No. 3, pp. 471-483, <https://doi.org/10.1108/JIC-01-2016-0004>.

Hashim, M.J., Osman, I. and Alhabshi, S.M. (2015), "Effect of intellectual capital on organizational performance", *Procedia-Social and Behavioral Sciences*, Vol. 211 No. 3, pp. 207-214. <https://doi.org/10.1016/j.sbspro.2015.11.085>.

Hidalgo, R.L., García-Meca, E. & Martínez, I. (2011). Corporate Governance and Intellectual Capital Disclosure. *J Bus Ethics*, Vol. 100, pp. 483–495. <https://doi.org/10.1007/s10551-010-0692-x>.

Ho, J.C., Chen, T.-H. and Wu, J.-J. (2022), "Are corporate social responsibility reports informative? Evidence from textual analysis of banks in China", *China Finance Review International*, Vol. 12 No. 1, pp. 101-120. <https://doi.org/10.1108/CFRI-04-2021-0081>

Hoitash, U., (2011). Should independent board members with social ties to management disqualify themselves from serving on the board? *Journal of Business Ethics*, Vol. 99, No. 3, pp. 399–423.

- 1  
2  
3 Hoitash, U., Hoitash, R. and Bedard, J.C. (2009), "Corporate governance and internal control  
4 over financial reporting: a comparison of regulatory regimes", *The Accounting Review*, Vol.  
5 84 No. 3, pp. 839-867. <https://doi.org/10.2308/accr.2009.84.3.839>.
- 6  
7 Holland, J. (2003). "Intellectual capital and the capital market—organization and competence",  
8 *Accounting, Auditing & Accountability Journal*, Vol. 16 No. 1, pp. 39-48.  
9 <https://doi.org/10.1108/09513570310464264>.
- 10  
11 Horton, J., Millo, Y., and Serafeim, G., (2012). Resources or power? Implications of social  
12 networks on compensation and firm performance. *Journal of Business Finance and*  
13 *Accounting*, Vol. 39, No. (3/4), pp. 399–426.
- 14  
15 Hsu, M.L., and Fan, H.L. (2010), "Organizational innovation climate and creative outcomes:  
16 Exploring the moderating effect of time pressure", *Creativity Research Journal*, Vol. 22 No. 4,  
17 pp. 378–386. <http://dx.doi.org/10.1080/10400419.2010.523400>.
- 18  
19 Hunter, S.T., Bedell, K.E., and Mumford, M.D. (2007), "Climate for creativity: A quantitative  
20 review", *Creativity Research Journal*, Vol. 19 No. 1, pp. 69-90. [http://dx.doi.org/10.](http://dx.doi.org/10.1080/10400410709336883)  
21 [1080/10400410709336883](http://dx.doi.org/10.1080/10400410709336883).
- 22  
23  
24 Ibarra Cisneros, M.A. and Hernandez-Perlines, F. (2018), "Intellectual capital and  
25 Organization performance in the manufacturing sector of Mexico", *Management Decision*,  
26 Vol. 56 No. 8, pp. 1818-1834. <https://doi.org/10.1108/MD-10-2017-0946>.
- 27  
28 Ibrahim, S., Diibuzie, G. and Abubakari, M. (2017), "The Impact of Internal Control Systems  
29 on Financial Performance: The Case of Health Institutions in Upper West Region of Ghana",  
30 *International Journal of Academic Research in Business and Social Sciences*, Vol. 7 No. 4, pp.  
31 684-696. <https://doi.org/10.6007/IJARBSS/v7-i4/2840>.
- 32  
33 International Federation of Accountants (IFAC), (2012), "Evaluating and Improving Internal  
34 Control in Organisations", IFAC, pp. 1-25.
- 35  
36 Jaussi, K.S. and Randel, A.E. (2014), "Where to look? Creative self-efficacy, knowledge  
37 retrieval, and incremental and radical creativity", *Creativity Research Journal*, Vol. 26 No. 4,  
38 pp. 400–410. <http://dx.doi.org/10.1080/10400419.2014.961772>.
- 39  
40 Jha Anand (2017). Financial Reports and Social Capital. *J Bus Ethics*. DOI 10.1007/s10551-  
41 017-3495-5.
- 42  
43 Jha, A. (2019), "Financial reports and social capital", *Journal of Business Ethics*, Vol. 155 No.  
44 2, pp. 567-596. <https://doi.org/10.1007/s10551-017-3495-5>.
- 45  
46 Jha, A. and Chen, Y. (2015), "Audit fees and social capital", *The Accounting Review*, Vol. 90  
47 No. 2, pp. 611-639. <https://doi.org/10.2308/accr-50878>.
- 48  
49 Johansen, T.R. and Pettersson, K., (2013). The impact of board interlocks on auditor choice  
50 and audit fees. *Corporate Governance: An International Review*, Vol. 21, No. 3, pp. 287–310.
- 51  
52 Jokipii, A. (2009). Determinants and consequences of internal control in firms: A contingency  
53 theory-based analysis. *Journal of Management & Governance*, Vol. 14, No. 2, pp. 115–144.  
54 <https://doi.org/doi:10.1007/s10997-009-9085-x>.
- 55  
56 Jones, T., (1995). Instrumental stakeholder theory: A synthesis of ethics and economics, *The*  
57 *Academy of Management Review*, 20, pp. 404-437.
- 58  
59 **Juan Pedro Sánchez-Ballesta & José Yagüe (2022) Social capital and earnings management in**  
60 **small and medium firms, Accounting Forum, 46:2, 191-**  
**214, DOI: 10.1080/01559982.2021.1935107.**

1  
2  
3 Kaawaase, T. K., Bananuka, J., Peter Kwizina, T., & Nabaweesi, J. (2019). "Intellectual capital  
4 and performance of small and medium audit practices: The interactive effects of  
5 professionalism". *Journal of Accounting in Emerging Economies*, ahead-of-print (ahead-of-  
6 print).

7  
8 Kalkan, A., Bozkurt, O. C., & Arman, M. (2014). "The impacts of intellectual capital,  
9 innovation and organizational on firm performance". *Procedia – Social and Behavioral  
10 Sciences*, Vol. 150, pp. 700–707. <https://doi.org/10.1016/j.sbspro.2014.09.025>

11  
12 Kamukama, N. (2013). "Intellectual capital: Company's invisible source of competitive  
13 advantage". *Competitiveness Review: An International Business Journal*, Vol. 23, No. 3, pp.  
14 260–283. <https://doi.org/10.1108/10595421311319834>

15  
16 Karbaila, F. Z. T., Pratama, B. C., Fakhruddin, I., & Pandansari, T. (2022). Maqashid Shariah  
17 Performance on Indonesian Islamic Banking: The Role of Intellectual Capital and Shariah  
18 Supervisory Board Reputation and Tenure. *Jurnal Ilmiah Ekonomi Islam*, Vol. 8, No. 3 3813-  
19 3822.

20  
21 [Kehelwalatenna, S.](#) (2016), "Intellectual capital performance during financial  
22 crises", *Measuring Business Excellence*, Vol. 20 No 3, pp. 55-  
23 78. <https://doi.org/10.1108/MBE-08-2015-0043>.

24  
25 [Kengatharan, N.](#) (2019), "A knowledge-based theory of the firm: Nexus of intellectual capital,  
26 productivity and firms' performance", *International Journal of Manpower*, Vol. 40, No. 6, pp.  
27 1056-1074. <https://doi.org/10.1108/IJM-03-2018-0096>.

28  
29 Khalique, M., Shaari, J.A.N. Isa, A.H.B.M. and Ageel, A. (2011), "Role of Intellectual Capital  
30 on the Organizational Performance of Electrical and Electronic SMEs in Pakistan",  
31 *International Journal of Business and Management*, Vol. 6 No. 9, pp. 253-257.  
32 <https://doi.org/10.5539/ijbm.v6n9p253>.

33  
34 Kim, Y. S., Kim, Y. and Kim, H. D. (2017), "Corporate social responsibility and internal  
35 control effectiveness", *Asia-Pacific Journal of Financial Studies*, Vol. 46 No. 2, pp. 341-372.  
36 <https://doi.org/10.1111/ajfs.12172>.

37  
38 Kim, Y., (2005). Board network characteristics and firm performance in Korea. *Corporate  
39 Governance: An International Review*, Vol. 13, No. 6, pp. 800–808.

40  
41 Kim, Y., Park, M. S., & Wier, B. (2012). Is earnings quality associated with corporate social  
42 responsibility? *Accounting Review*, Vol. 87, No. 3, pp. 761–796. doi:10.2308/Accr-10209.

43  
44 King, A. M. (2016), "A guide to COSO's framework: an important, practical resource to help  
45 your transition to the updated COSO internal control framework". *Strategic Finance*, Vol. 97  
46 No. 10, pp. 12-13.

47  
48 Kor, Y.Y. and Sundaramurthy, C., (2009). Experience-based human capital and social capital  
49 of outside directors. *Journal of Management*, Vol. 35, No. 4, pp. 981–1006.

50  
51 Krishnan, J. (2005). "Audit committee quality and internal control: An empirical analysis", *The  
52 accounting review*, Vol. 80 No. 2, pp. 649-675. <https://doi.org/10.2308/accr.2005.80.2.649>.

53  
54 [Kuhn, J., Ahuja, M.](#) and [Mueller, J.](#) (2013), "An examination of the relationship of IT control  
55 weakness to company financial performance and health", *International Journal of Accounting  
56 & Information Management*, Vol. 21 No. 3, pp. 227-240. <https://doi.org/10.1108/IJAIM-12-2011-0042>.

57  
58 Kusi-Sarpong, S., Mubarik, M. S., Khan, S. A., Brown, S. and Mubarak, M. F. (2022),  
59 "Intellectual capital, blockchain-driven supply chain and sustainable production: Role of  
60

supply chain mapping”, *Technological Forecasting and Social Change*, Vol.175, A, 121331. <https://doi.org/10.1016/j.techfore.2021.121331>.

Laallam, A., Kassim, S., Engku Ali, E. R. A., & Saiti, B. (2020). Intellectual capital in non-profit organizations: lessons learnt for waqf institutions. *ISRA International Journal of Islamic Finance*, Vol. 12, No. 1, pp. 27-48.

Laallam, A., Uluyol, B., Kassim, S. and Engku Ali, E.R.A. (2022), "The components of intellectual capital and organizational performance in waqf institutions: evidence from Algeria based on structural equation modelling", *Journal of Islamic Accounting and Business Research*, Vol. 13 No. 7, pp. 1110-1136. <https://doi.org/10.1108/JIABR-07-2021-0192>.

Lari Dashtbayaz, M., Salehi, M. and Safdel, T. (2019), "The effect of internal controls on financial reporting quality in Iranian family firms", *Journal of Family Business Management*, Vol. 9 No. 3, pp. 254-270. <https://doi.org/10.1108/JFBM-09-2018-0047>.

Laužikas, M. and Dailydaitė, S. (2015), "Impacts of social capital on transformation from efficiency to innovation-driven business". *Journal of Business Economics and Management*, Vol. 16 No. 1, pp. 37–51. <http://dx.doi.org/10.3846/16111699.2012.754374>.

Lee, C.C. and Lin, C.K. (2019), "The major determinants of influencing the operating performance from the perspective of intellectual capital: Evidence on CPA industry", *Asia Pacific Management Review*, Vol. 24 No. 2, pp. 124-139. <https://doi.org/10.1016/j.apmrv.2018.01.006>.

Lev, B. (2000), “Intangibles: Management, Measurement, and Reporting”, *Brookings Institution Press, Washington, DC. The USA*.

Li, J., Xia, T. and Wu, D. (2022), “Internal Control Quality, Related Party Transactions and Accounting Information Comparability”, *Procedia Computer Science*, Vol. 199 No. 163, pp. 1252-1259. <https://doi.org/10.1016/j.procs.2022.01.159>.

Li, X. (2020), “The effectiveness of internal control and innovation performance: An intermediary effect based on corporate social responsibility”, *Plos One*, Vol. 15 No. 6, e0234506. <https://doi.org/10.1371/journal.pone.0234506>.

Li-Chang, H., & Chao-Wang, H. (2012). “Clarifying the effect of intellectual capital on performance: The mediating role of dynamic capability”. *British Journal of Management*, Vol. 23, No. 2, pp. 179–205.

Lins, K.V., Servaes, H. and Tamayo, A. (2017), “Social capital, trust, and firm performance: the value of corporate social responsibility during the financial crisis”, *The Journal of Finance*, Vol. 72 No. 4, pp. 1785-1824. <https://doi.org/10.1111/jofi.12505>.

Liu, C., Lin, B. and Shu, W. (2017), "Employee quality, monitoring environment and internal control", *China Journal of accounting research*, Vol. 10 No 1, pp. 51-70. <https://doi.org/10.1016/j.cjar.2016.12.002>.

Lotfi, A., Salehi, M. and Lari Dashtbayaz, M. (2021), "The effect of intellectual capital on fraud in financial statements", *The TQM Journal*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/TQM-11-2020-0257>.

Manzoor, A. (2014), "A look at efficiency in public administration: Past and future". Sage Open, Vol. 4 No. 4, pp. 1–5. <http://dx.doi.org/10.1177/2158244014564936>.

1  
2  
3 Marr, B., Glay, D. and Neely, A. (2003), "Why do firm measure their intellectual capital?",  
4 *Journal of Intellectual Capital*, Vol. 4 No. 4, pp. 441-464.  
5 <https://doi.org/10.1108/14691930310504509>.

6  
7 Meles, A., Porzio, C. Sampagnaro, G. and Verdoliva, V. (2016), "The impact of the intellectual  
8 capital efficiency on commercial banks performance: Evidence from the US", *Journal of*  
9 *Multinational Financial Management*, Vol. 36 No. 5, pp. 64-74.  
10 <https://doi.org/10.1016/j.mulfin.2016.04.003>.

11  
12  
13 Nawawi, A. and Salin, A.S.A.P. (2018), "Internal control and employees' occupational fraud  
14 on expenditure claims", *Journal of Financial Crime*, Vol. 25 No. 3, pp. 891-906.  
15 <https://doi.org/10.1108/JFC-07-2017-0067>.

16  
17 Nazari, J.A. (2010), "An investigation of the relationship between the intellectual capital  
18 components and firm's financial performance", *Doctoral dissertation, University of Calgary,*  
19 *Haskayne School of Business*, Alberta. Canada

20  
21 Ngah, R. and Ibrahim, A. R. (2012), "The Relationship of Intellectual Capital, Innovation and  
22 Organisational Performance: A Preliminary Study in Malaysian SMEs", *9th World Congress*  
23 *of the Academy for Global Business Advancement (AGBA)*, Vol. 9 No.1, pp. 593–596.

24  
25 Nkundabanyanga, S. K. (2016). "Board governance, intellectual capital and firm performance-  
26 Importance of multiplicative effects". *Journal of Economic and Administrative Sciences*, Vol.  
27 32, No. 1, pp. 20–45. <https://doi.org/10.1108/JEAS-09-2014-0020>

28  
29 Olamide, A. and Ogbechie, R. (2021), "Social capital and business performance: a study of  
30 female-owned SMEs in the Nigerian informal sector", *Small Enterprise Research*, Vol. 28 No.  
31 2, pp. 190-205. <https://doi.org/10.1080/13215906.2021.1901140>.

32  
33 Oradi, J., Asiaei, K. and Rezaee, Z. (2019), "CEO financial background and internal control  
34 weaknesses", *Corporate Governance: An International Review*, Vol. 28 No. 2, pp. 119-140.  
35 <https://doi.org/10.1111/corg.12305>.

36  
37 Oradi, J., Asiaei, K., & Rezaee, Z. (2019). *CEO financial background and internal control*  
38 *weaknesses*, Available online at: <https://doi.org/10.1111/corg>.

39  
40 Ouchi, W. G. (1979), "A conceptual framework for the design of organizational control  
41 mechanisms", *Management Science*, Vol. 25 No. 9, pp. 833-848.  
42 <https://doi.org/10.1287/mnsc.25.9.833>.

43  
44  
45 Oussii, A.A. and Boulila Taktak, N. (2018), "The impact of internal audit function  
46 characteristics on internal control quality", *Managerial Auditing Journal*, Vol. 33 No. 5, pp.  
47 450-469. <https://doi.org/10.1108/MAJ-06-2017-1579>.

48  
49 Perry-Smith, J.E. (2006), "Social yet creative: The role of social relationships in facilitating  
50 individual creativity", *Academy of Management Journal*, Vol. 49 No. 1, pp. 85-101.  
51 <https://doi.org/10.5465/amj.2006.20785503>.

52  
53 Pokynchereda, N., Gudzenko, N. and Nastenko, M. (2017), "Human resource accounting in the  
54 system of value-based business management", *Investment management and financial*  
55 *Innovation*, Vol. 14 No. 2, pp. 386-393. [https://doi.org/10.21511/imfi.14\(2-2\).2017.10](https://doi.org/10.21511/imfi.14(2-2).2017.10).

56  
57 Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual*  
58 *Review of Sociology*, Vol. 24, pp. 1–24.  
59  
60

- Public Company Accounting Oversight Board (PCAOB). (2004), An Audit of Internal Control over Financial Reporting Performed in Conjunction with an Audit of Financial Statements. Auditing Standard No. 2. Available at: [http://www.pcaobus.org/Standards/Auditing/Pages/Auditing\\_Standard\\_2.aspx](http://www.pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_2.aspx)
- Pulic, A. (2000), "VAIC™—an accounting tool for IC management", *International Journal of technology management*, Vol. 20 No. 5-8, pp. 702-714. <https://doi.org/10.1504/IJTM.2000.002891>.
- Rae, K., Sands, J. and Subramaniam, N. (2017), "Associations among the five components within COSO internal control integrated framework as the underpinning of quality corporate governance", *Australasian Accounting, Business, and Finance Journal*, Vol. 11 No. 1, pp. 28-54. <http://doi.org/10.14453/aabfj.v11i1.4>.
- Rehman, S.-U., Elrehail, H., Alsaad, A. and Bhatti, A. (2021a), "Intellectual Capital and innovative performance: a mediation-moderation perspective", *Journal of Intellectual Capital*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JIC-04-2020-0109>.
- Rezaei, Z. and Mousavi, Z. (2015). The impact of intellectual capital on the performance of Islamic banking, *Indian Journal of Fundamental and Applied Life Sciences*, Vol. 5, No. 1, pp. 1806–1813.
- Riahi-Belkaoui, A. (2003). "Intellectual capital and firm performance of US multinational firms -a study of the resource-based and stakeholder views". *Journal of Intellectual Capital*, Vol. 4, No. 2, pp. 215–226. <https://doi.org/10.1108/14691930310472839>
- Rodrigues, L.L., Tejedo-Romero, F. and Craig, R. (2017), "Corporate governance and intellectual capital reporting in a period of financial crisis: evidence from Portugal", *International Journal of Disclosure and Governance*, Vol. 14 No.1, pp. 1-29. <https://doi.org/10.1057/jdg.2015.20>.
- Romney, M. B. and Steinbart, P. J. (2012), "Accounting Information Systems", Pearson, Upper Saddle River, New Jersey, USA.
- Sahloul, M. M. (2019), "Exploring the Perceptions of Accountants on Academic Preparations Related to Occupational Fraud and Internal Control Weaknesses", Doctoral dissertation and projects. [Liberty University https://digitalcommons.liberty.edu/doctoral/1969](https://digitalcommons.liberty.edu/doctoral/1969).
- Salehi, M. and Ghasempour, F. (2021), "Material internal control weakness with intangible assets, capital structure and commercial risk", *Management Research Review*, Vol. 44 No. 7, pp. 1059-1082. <https://doi.org/10.1108/MRR-06-2020-0335>.
- Salehi, M., Ali Mohammed Al-Msafir, H., Homayoun, S. and Zimon, G. (2022), "The effect of social and intellectual capital on fraud and money laundering in Iraq", *Journal of Money Laundering Control*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JMLC-12-2021-0142>.
- Salehi, M., Daemi Gah, A., Akbari, F. and Naghshbandi, N. (2021), "Does accounting details play an allocative role in predicting macroeconomic indicators? Evidence of Bayesian and classical econometrics in Iran", *International Journal of Organizational Analysis*, Vol. 29 No. 1, pp. 194-219. <https://doi.org/10.1108/IJOA-10-2019-1902>.
- Salehi, M., Daemi, A. and Akbari, F. (2020), "The effect of managerial ability on product market competition and corporate investment decisions: Evidence from Iran", *Journal of*

1  
2  
3 *Islamic Accounting and Business Research*, Vol. 11 No. 1, pp. 49-69.  
4 <https://doi.org/10.1108/JIABR-10-2016-0113>.

5  
6 Salehi, M., Fakhri Mahmoudi, M.R. and Daemi Gah, A. (2019), "A meta-analysis approach for  
7 determinants of effective factors on audit quality: Evidence from emerging market", *Journal*  
8 *of Accounting in Emerging Economies*, Vol. 9 No. 2, pp. 287-312.  
9 <https://doi.org/10.1108/JAEE-03-2018-0025>.

10  
11  
12 Salehi, M., Rajaei, R. and Edalati Shakib, S. (2021), "The relationship between CEOs'  
13 narcissism and internal controls weaknesses", *Accounting Research Journal*, Vol. 34 No. 5, pp.  
14 429-446. <https://doi.org/10.1108/ARJ-06-2020-0145>

15  
16 Salehi, M., Ziba, N. and Daemi Gah, A. (2018), "The relationship between cost stickiness and  
17 financial reporting quality in Tehran Stock Exchange", *International Journal of Productivity*  
18 *and Performance Management*, Vol. 67 No. 9, pp. 1550-1565. [https://doi.org/10.1108/IJPPM-](https://doi.org/10.1108/IJPPM-10-2017-0255)  
19 [10-2017-0255](https://doi.org/10.1108/IJPPM-10-2017-0255).

20  
21 Salehi, M. & Farzaneh, M. (2018), The impact of board's human capital on the relationship  
22 between board's characteristics and firm's performance in Iran, *International Journal of*  
23 *Learning and Intellectual Capital*, Vol. 15, No. 4, pp. 293-308. Doi:  
24 10.1504/IJLIC.2018.095879.

25  
26  
27  
28 Sardo, F. and Serrasqueiro, Z. (2018), "Intellectual capital, growth opportunities, and financial  
29 performance in European firms: Dynamic panel data analysis", *Journal of Intellectual Capital*,  
30 Vol. 19 No. 4, pp. 747-767. <https://doi.org/10.1108/JIC-07-2017-0099>.

31  
32 Seleim, A., Ashour, A. and Bontis, N. (2004), "Intellectual capital in Egyptian software  
33 firms", *The Learning Organization*, Vol. 11 No. 4/5, pp. 332-  
34 346. <https://doi.org/10.1108/09696470410538233>.

35  
36 Sofie, R. (1999), "Managing Intellectual Capital: The Work with the Navigator in the Skandia  
37 Group", *Journal of Human Resource Costing & Accounting*, Vol. 4 No. 1, pp. 59-67.  
38 <https://doi.org/10.1108/eb029054>.

39  
40 Sözbilir, F. (2018), "The interaction between social capital, creativity and efficiency in  
41 organizations", *Thinking Skills and Creativity*, Vol. 27 No. 9, pp. 92-100.  
42 <https://doi.org/10.1016/j.tsc.2017.12.006>.

43  
44 Stuart, T.E. and Yim, S., (2010). Board interlocks and the propensity to be targeted in private  
45 equity transactions. *Journal of Financial Economics*, Vol. 97, No. 1, pp. 174-189.

46  
47 Subramaniam, N., Stewart, J., Ng, C. and Shulman, A. (2013), "Understanding corporate  
48 governance in the Australian public sector: A social capital approach", *Accounting, Auditing*  
49 *& Accountability Journal*, Vol. 26 No. 6, pp. 946-977. [https://doi.org/10.1108/AAAJ-Jan-](https://doi.org/10.1108/AAAJ-Jan-2012-00929)  
50 [2012-00929](https://doi.org/10.1108/AAAJ-Jan-2012-00929).

51  
52 Suebvises, P. (2018), "Social capital, citizen participation in public administration, and public  
53 sector performance in Thailand". *World Development*, Vol. 109 No. 18, pp. 236-248.  
54 <https://doi.org/10.1016/j.worlddev.2018.05.007>.

55  
56 Tayles, M., Pike, R. H., & Sofian, S. (2007). "Intellectual capital, management accounting  
57 practices and corporate performance: Perceptions of managers". *Accounting, Auditing &*  
58  
59  
60



1  
2  
3 *Accountability Journal*, Vol. 20, No. 4, pp. 522–548. <https://doi.org/10.1108/09513570710762575>

4  
5  
6 Teece, D., Pisano, G., & Shuen, A. (1997). “Dynamic capabilities and strategic management”.  
7 *Strategic Management Journal*, Vol. 18, No.7, pp. 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:73.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:73.0.CO;2-Z)

8  
9  
10 Tipu, S.A.A. and Fantazy, K. (2018), “Exploring the relationships of strategic entrepreneurship  
11 and social capital to sustainable supply chain management and organizational performance”,  
12 *International Journal of Productivity and Performance Management*, Vol. 67 No. 9, pp. 2046-  
13 2070. <https://doi.org/10.1108/IJPPM-04-2017-0084>.

14  
15 Turkina, E. and Thi Thanh Thai, M. (2013), "Social capital, networks, trust, and immigrant  
16 entrepreneurship: A cross-country analysis", *Journal of Enterprising Communities: People*  
17 *and Places in the Global Economy*, Vol. 7 No. 2, pp. 108-124.  
18 <https://doi.org/10.1108/17506201311325779>.

19  
20 Unerman, J. and Guthrie, J. (2008, July), "UK Account Preparers' Perspectives on the Role of  
21 Intellectual Capital Reporting", *In Global Accounting and Organisational Change*  
22 *Conference*, pp. 9-11, Available at SSRN: <https://ssrn.com/abstract=1358762>.

23  
24 Useem, M. (1984). *The Inner Circle: Large Corporations and the Rise of Business Political*  
25 *Activity*. New York: Oxford University Press.

26  
27 Vafeas, N., (1999). Board meeting frequency and firm performance. *Journal of Financial*  
28 *Economics*, Vol. 53, No. 1, pp. 113–142.

29  
30 Venieris, G., Naoum, V.S. and Vlismas, O. (2015), "Organization capital and sticky behaviour  
31 of selling, general and administrative expenses", *Management Accounting Research*, Vol. 26  
32 No. 4, pp. 54-82. <https://doi.org/10.1016/j.mar.2014.10.003>.

33  
34 Vu, Q. and Nga, N. T. T. (2021),” Does the implementation of internal controls promote firm  
35 profitability? Evidence from private Vietnamese small-and medium-sized enterprises  
36 (SMEs)”, *Finance Research Letters*, Vol. 45 No. 48, A. 102178. .  
37 <https://doi.org/10.1016/j.frl.2021.102178>.

38  
39 Wang Xue, Feng Cao, Kangtao Ye (2018). Mandatory Corporate Social Responsibility (CSR)  
40 Reporting and Financial Reporting Quality: Evidence from a Quasi-Natural Experiment, *J Bus*  
41 *Ethics*, Vol. 152, pp. 253–274.

42  
43 Widiatmoko, J., Indarti, M. G. K., Pamungkas, I. D., Ntim, C. G., & Ntim, C. G. (2020).  
44 “Corporate governance on intellectual capital disclosure and market capitalization”. *Cogent*  
45 *Business & Management*, Vol. 7, No. 1. <https://doi.org/10.1080/23311975.2020.1750332>.

46  
47 Woolcock, M. (2001). The place of social capital in understanding social and economic  
48 outcomes. *Canadian Journal of Policy Research*, Vol. 2, pp. 11–17.

49  
50 Xu, J. and Wang, B. (2019), “Intellectual capital and financial performance of Chinese  
51 agricultural listed companies”, *Custos e Agronegocio on Line*, Vol. 15 No. 1, pp. 273-290.

52  
53 Yao, H., Haris, M., Tariq, G., Javaid, H. M. and Khan, M. A. S. (2019),”Intellectual capital,  
54 profitability, and productivity: evidence from Pakistani financial institutions”, *Sustainability*,  
55 Vol. 11 No. 14, 3842. <https://doi.org/10.3390/su11143842>.

56  
57 Yong, J.Y., Yusliza, M.Y., Ramayah, T., Farooq, K. and Tanveer, M.I. (2022), "Accentuating  
58 the interconnection between green intellectual capital, green human resource management and  
59 sustainability", *Benchmarking: An International Journal*. <https://doi.org/10.1108/BIJ-11-2021-0641>

1  
2  
3 Zakaria, K.M., Nawawi, A. and Salin, A.S.A.P. (2016), "Internal controls and fraud – empirical  
4 evidence from oil and gas company", *Journal of Financial Crime*, Vol. 23 No. 4, pp. 1154-  
5 1168. <https://doi.org/10.1108/JFC-04-2016-0021>.

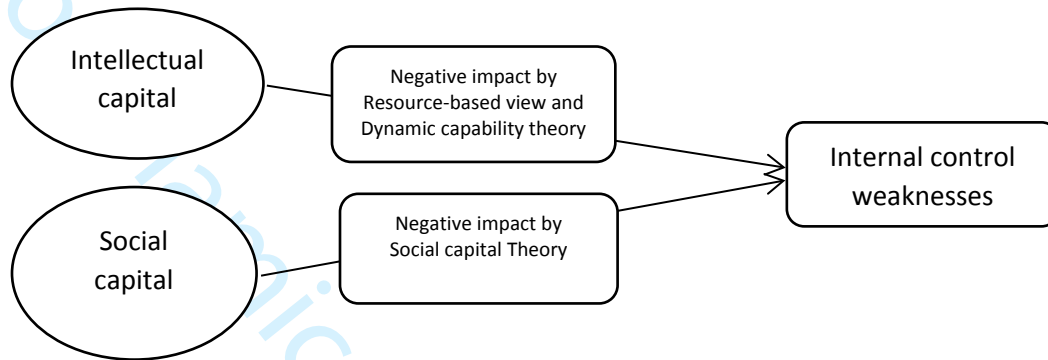
6  
7 Zhang, M., Qi, Y. Wang, Z. Pawar, K.S. and Zhao, X. (2018), "How does intellectual capital  
8 affect product innovation performance? Evidence from China and India", *International*  
9 *Journal of Operations & Production Management*, Vol. 38 No. 3, pp.895-  
10 914. <https://doi.org/10.1108/IJOPM-10-2016-0612>.

11  
12 Zhang, Y., Zhou, J. and Zhou, N. (2007), "Audit committee quality, auditor independence, and  
13 internal control weaknesses", *Journal of accounting and public policy*, Vol. 26 No. 3, pp. 300-  
14 327. <https://doi.org/10.1016/j.jaccpubpol.2007.03.001>.

15  
16 Zhou, H., Chen, H. and Cheng, Z. (2016), "Internal Control, Corporate Life Cycle, and Firm  
17 Performance", *The Political Economy of Chinese Finance (International Finance Review, Vol.*  
18 *17)*, pp. 189-209. <https://doi.org/10.1108/S1569-376720160000017013>.

19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

**Figure 1.**  
**The relationship between variables and applied theories**



**Table 1.**  
**The number of firms in the statistical population**

Description	Eliminated firms in total periods	Total No. of firms
Total listed firms on the Tehran Stock Exchange		445
Eliminating financial intermediaries, financial supply, insurance, and investment firms	88	
Firms with more than six months of transaction halt	111	
Eliminating firms that entered the Stock Exchange during the study period	57	
Eliminating lack of access to information	113	
Statistical population		187

**Table 2.**  
**Variable description**

Variable	Type	Definition
CI	Dependent variable	IT Material Weakness: if there is a weakness in the audit report, it equals one; otherwise, zero. ICWF: if there is a financial weakness in the audit report, it equals one and, otherwise, zero. ICWOF: If the audit report has a non-financial weakness, it equals one; otherwise, zero.
Intellectual capital	Independent variable	Intellectual Capital. The model of Pulic (2000:2004) measures intellectual capital components. $VA = out - in$ Value Added = outputs - inputs The salary and wage expenses are not included in this model's input because of human capital's active role in creating value. $VA = OP + EC + D + A$

		<p>Value Added = intangible assets depreciation + fixed asset depreciation + cost of intellectual capital / intellectual capital expense + organizational profit</p> <p>HCE= VA ÷ HC human capital efficiency = value-added ÷ human capital</p> <p>Human capital includes costs of direct and indirect wages/direct and indirect wage expenses, marketing, sales, and office sectors wage expenses</p> <p>Structural Capital =SC</p> <p>SC= VA-HC structural capital = value-added – human capital</p> <p>SCE= SC ÷ VA Structural Capital efficiency = structural capital ÷ value-added</p> <p>Nazari (2010) states that structural capital includes customer capital and Organizational capital, according to Edvinsson and Molone's (1997) model.</p> <p>SC=CC+OC</p> <p>CC= Customer Capital</p> <p>OC= Organizational capital</p> <p>In order to calculate the customer and organizational capital, the following are used</p> <p>CC= Marketing Cost</p> <p>CCE= CC/VA</p> <p>OC= Innovation capital + Process Capital</p> <p>Inc= Research and development expenditure</p> <p>Pc= Sc- Cc- Inc</p>
Soc	Independent variable	Social capital. Iran's social capital ranking (Legatum index) is used.
AIS	Control	<p>the model of Habib and Bhuiyan (2011) is used to calculate an auditor's specialization</p> $\frac{\text{total assets of all the employers in every audit institution in an specialized industrty}}{\text{total assets of all the employers in an specialized industry}}$ <p>The audit institutions' industry specialisation is confirmed if the above equation's result is higher than 1.2 (the number of companies). So the specialized institutions equal one, and other institutions equal zero</p>
BSF	Control	If at least one of the board members has a relevant degree in financial fields such as accounting, economy, and business management, it equals one; otherwise, zero.
BSI	Control	If at least one board member has a relevant degree in one of the related industries, it equals one; otherwise, zero.
AGE	Control	Equals the years from the date of company establishment to the present year
Size	Control	The logarithm of total assets at the end of the fiscal year.
LEV	Control	The total debt to the total assets of the company.
ROA:	Control	Return on Assets is calculated by dividing the net income by the company's total assets.
MTB:	Control	The market value ratio to the book value of the shareholder's equity in the current year.
LOSS	Control	If the firm is at a loss during the current year, it equals one; otherwise, zero.
BLND:	Control	Equals the ratio of responsible managers to non-responsible managers.
BE	Control	Equals the number of board meetings during the current year.

BUSY	Control	If the fiscal year corresponds to March 20, it equals one; otherwise, zero.
Industry:	Control	Dummy industry variable.
Year:	Control	Dummy year variable.

**Table 3.**  
Descriptive statistics of the variables

variable	obs	Mean	Std. dev	Min	Max
CI	1301	0.232	0.231	0	0.828
ICWF	1301	0.716	0.450	0	1
ICWOF	1301	0.933	0.249	0	1
ICWIT	1301	0.162	0.369	0	1
INCAP	1297	1.594	0.515	-5.314	5.781
SOC	1309	95.285	25.592	55	121
AIS	1309	0.433	0.495	0	1
BSF	1277	0.946	0.224	0	1
BSI	1192	0.890	0.311	0	1
AGE	1309	39.301	13.185	8	67
SIZE	1309	14.301	1.542	10.532	19.773
LEV	1309	0.612	0.270	0.061	4.002
ROA	1308	0.214	2.207	-72.695	10.045
LOSS	1307	0.139	0.346	0	1
MTB	1300	4.265	6.016	-59.594	53.464
BLND	1307	0.693	0.199	0	1.166
BUSY	1309	0.684	0.464	0	1
BE	1306	14.661	5.238	5	50

**Table 4.**  
The results of the model

variable	Coef	Std.Err	Z	p-value
Cons	-2.730	0.327	-8.34	0.000***
Incap	-0.027	0.008	-3.21	0.001***
Soc	-0.000	0.000	-2.36	0.018**
Ais	-0.013	0.006	-1.96	0.050**
Bsf	-0.121	0.038	-3.16	0.002***
Bsi	0.098	0.032	3.01	0.003***
Age	0.045	0.005	7.74	0.000***
Size	0.084	0.027	3.12	0.002***
Lev	0.014	0.005	2.63	0.008***
Roa	-0.203	0.007	-25.66	0.000***
Loss	-0.037	0.026	-1.41	0.160
Mtb	0.006	0.002	2.72	0.006***
Blnd	0.154	0.051	3.02	0.003***
Busy	0.033	0.013	2.53	0.020**
Be	-0.184	0.018	-9.74	0.000***
Weighted Statistics				
R Squared	0.2853			
Adjusted R-Squared	0.0194			
F(13,952)	29.22			
Prob(F Statistic)	0.000***			
F_Limer	F(181,951)= 1.76			
	0.000***			

<i>Hasman</i>	Chi2(13)= 208.15
	0.000***

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 5.**

**The results of the model by Least Square Regression**

variable	Coef	Std.Err	z	p-value
Cons	0.240	0.099	2.42	0.016**
Incap	-0.031	0.012	-2.47	0.014**
Soc	-0.002	0.000	-9.01	0.000***
Ais	-0.004	0.001	-2.94	0.003***
Bsf	-0.054	0.027	-1.95	0.051*
Bsi	0.038	0.020	1.85	0.064*
Age	0.001	0.000	2.62	0.009***
Size	0.015	0.005	2.94	0.003***
Lev	0.061	0.026	2.34	0.019**
Roa	-0.000	0.000	-2.04	0.041**
Loss	-0.073	0.020	-3.51	0.000***
Mtb	0.002	0.001	2.17	0.030**
Blnd	0.050	0.035	1.41	0.159
Busy	0.079	0.029	2.73	0.006***
Be	-0.001	0.001	-1.26	0.206
Weighted Statistics				
Number of obs	1147			
R Squared	0.6749			
Adjusted R-Squared	0.6673			
P-value	F(14,1132)= 12.50			
	0.000***			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 6.**

**The results of the model by fixed effects**

variable	Coef	Std.Err	z	p-value
Cons	0.240	0.086	2.78	0.005***
Incap	-0.020	0.009	-2.18	0.029*
Soc	-0.002	0.000	-11.80	0.000***
Ais	-0.013	0.004	-2.81	0.005***
Bsf	-0.054	0.027	-1.97	0.049*
Bsi	0.038	0.018	2.10	0.036**
Age	0.001	0.000	2.98	0.003***
Size	0.015	0.004	3.36	0.001***
Lev	0.061	0.029	2.13	0.033**
Roa	-0.030	0.017	-1.75	0.081*
Loss	-0.073	0.018	-4.05	0.000***
Mtb	0.002	0.001	2.25	0.025**
Blnd	0.050	0.035	1.40	0.160
Busy	0.006	0.002	2.72	0.006***
Be	-0.001	0.001	-1.24	0.215
Weighted Statistics				
Number of obs	1147			
R Squared	0.1601			
Adjusted R-Squared	0.0323			
P-value	Chi2(14) = 445.85			
	0.000***			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 7.**  
**Results of the model for T+1**

variable	Coef	Std.Err	Z	p-value
Cons	-4.350	0.555	-7.83	0.000***
Incap	-0.165	0.073	-2.26	0.024**
Soc	-0.036	0.016	-2.27	0.024**
Ais	-0.003	0.001	-1.91	0.057*
Bsf	-0.173	0.060	-2.85	0.004***
Bsi	0.152	0.050	3.03	0.003***
Age	0.026	0.009	2.90	0.004***
Size	0.190	0.044	4.24	0.000***
Lev	0.004	0.000	4.49	0.000***
Roa	0.055	0.025	2.19	0.029**
Loss	0.029	0.048	0.60	0.551*
Mtb	0.004	0.002	2.30	0.022**
Blnd	0.254	0.080	3.17	0.002***
Busy	0.004	0.000	9.93	0.000***
Be	-0.353	0.050	-6.97	0.000***
Weighted Statistics				
R_Squared	0.2132			
Adjusted R-Squared	0.0083			
P_value	F(13,783)=16.32			
	0.000			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 8.**  
**Multiple Linear Regression (Non-financial internal control weakness)**

variable	Coef	Std.Err	Z	p-value
Cons	0.093	0.121	7.72	0.000***
Incap	-0.014	0.005	-2.80	0.005***
Soc	-0.058	0.020	-2.80	0.005***
Ais	-0.033	0.006	-5.04	0.000***
Bsf	-0.000	0.000	-2.27	0.023**
Bsi	0.012	0.006	1.90	0.057*
Age	0.003	0.000	9.62	0.000***
Size	0.018	0.003	5.01	0.000***
Lev	0.054	0.029	1.82	0.069*
Roa	-0.015	0.011	-1.37	0.171*
Loss	0.047	0.015	3.03	0.002***
Mtb	-0.002	0.001	-1.33	0.183*
Blnd	0.069	0.026	2.66	0.008***
Busy	0.003	0.001	2.02	0.043**
Be	-0.665	0.316	-2.10	0.036**
Weighted Statistics				
R_Squared	0.0111			
Adjusted R-Squared	0.0358			
Wald chi2(14)	21.34			
Prob(F_Statistic)	0.0932			
F_Limer	F(181,952)= 2.51			
	0.000			
Hausman	Chi2(13)= 3.80			

0.9932

Note: \*\*\*, \*\* and\* denote significance at 99%,95% and 90% respectively

**Table 9.****Least Square Regression (Non-financial internal control weakness)**

variable	Coef	Std.Err	z	p-value
Cons	0.956	0.110	8.65	0.000***
Incap	-0.007	0.002	-2.93	0.004***
Soc	-0.018	0.005	-3.09	0.002***
Ais	-0.096	0.014	-6.53	0.000***
Bsf	-0.007	0.002	-2.93	0.004***
Bsi	0.078	0.033	2.31	0.021**
Age	0.084	0.023	3.65	0.000***
Size	0.006	0.002	2.48	0.013***
Lev	0.051	0.030	1.70	0.089*
Roa	-0.021	0.014	-1.48	0.139*
Loss	0.039	0.024	1.64	0.101*
Mtb	-0.002	0.001	-2.00	0.045**
Blnd	-0.053	0.040	-1.31	0.191*
Busy	0.009	0.003	2.86	0.004***
Be	-0.076	0.041	-1.84	0.066*
Weighted Statistics				
Number of obs	1147			
R Squared	0.6849			
Adjusted R-Squared	0.5393			
P-value	F(14,1132)= 1.63			
	0.0662			

Note: \*\*\*, \*\* and\* denote significance at 99%,95% and 90% respectively

**Table 10.****Fixed effects Regression (Non-financial internal control weakness)**

variable	Coef	Std.Err	z	p-value
Cons	0.748	0.353	2.11	0.035**
Incap	-0.001	0.000	-2.85	0.004***
Soc	-0.009	0.004	2.25	0.025**
Ais	-0.001	0.000	-2.85	0.004***
Bsf	-0.026	0.013	-1.87	0.061*
Bsi	0.004	0.000	4.49	0.000***
Age	0.026	0.009	2.88	0.004***
Size	0.026	0.029	0.91	0.365*
Lev	0.077	0.044	1.73	0.084*
Roa	-0.093	0.024	-3.86	0.000***
Loss	0.054	0.028	1.90	0.058*
Mtb	-0.001	0.001	-1.21	0.225*
Blnd	0.024	0.008	2.90	0.004***
Busy	0.022	0.012	1.78	0.075*
Be	-0.294	0.131	-2.24	0.025**
Weighted Statistics				
Number of obs	1147			
R Squared	0.0125			
Adjusted R-Squared	0.5720			
P-value	F(13,952)=0.93			
	0.5232			

Note: \*\*\*, \*\* and\* denote significance at 99%,95% and 90% respectively



**Table 11.**  
**The results of T+1**

variable	Coef	Std.Err	Z	p-value
Cons	-0.046	0.087	-0.53	0.597*
Incap	-0.073	0.033	-2.18	0.030**
Soc	-0.068	0.034	-1.96	0.050**
Ais	-0.026	0.017	-1.55	0.122*
Bsf	-0.003	0.012	-1.92	0.054*
Bsi	0.026	0.008	3.09	0.002***
Age	0.086	0.028	3.00	0.003***
Size	0.008	0.004	1.92	0.055*
Lev	0.004	0.001	3.21	0.002***
Roa	-0.004	0.002	-1.66	0.097*
Loss	0.011	0.005	1.99	0.047**
Mtb	-0.000	0.001	-0.44	0.663*
Blnd	0.003	0.001	2.15	0.032**
Busy	0.015	0.008	1.96	0.050**
Be	-0.003	0.001	-2.11	0.035**
Weighted Statistics				
R_Squared	0.0064			
Adjusted R-Squared	0.0454			
Wald chi2(14)	9.00			
Prob(F Statistic)	0.8310			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 12.**  
**Multiple Linear Regression (IT internal control weakness)**

variable	Coef	Std.Err	Z	p-value
Cons	-1.111	0.509	-2.18	0.029**
Incap	-0.010	0.002	4.86	0.000***
Soc	-0.093	0.024	-3.81	0.000***
Ais	-0.009	0.004	2.02	0.045**
Bsf	-0.001	0.000	-2.18	0.029**
Bsi	0.003	0.000	9.62	0.000***
Age	0.020	0.010	1.97	0.049**
Size	0.054	0.042	1.29	0.198*
Lev	0.002	0.001	1.90	0.057*
Roa	0.012	0.006	2.02	0.044**
Loss	-0.000	0.000	-1.75	0.083*
Mtb	0.085	0.029	2.89	0.004***
Blnd	0.001	0.000	2.63	0.009***
Busy	-0.003	0.001	-2.18	0.030**
Be	-0.026	0.013	-1.87	0.061*
Weighted Statistics				
R Squared	0.0169			
Adjusted R-Squared	0.5107			
P_value	F(13,952)=1.26			
	0.2311			
F_Limer	F(181,952)= 2.42			
	0.000			
Hausman	Chi2(13)= 23.65			
	0.0346			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 13.**

**Least Square Regression (IT internal control weakness)**

variable	Coef	Std.Err	z	p-value
Cons	0.295	0.158	1.87	0.062*
Incap	-0.018	0.003	-5.01	0.000***
Soc	-0.522	0.221	-2.36	0.018**
Ais	-0.002	0.000	-3.71	0.000***
Bsf	-0.073	0.030	-2.37	0.018**
Bsi	0.060	0.034	1.77	0.076*
Age	0.001	0.000	1.66	0.098*
Size	-0.017	0.008	-2.05	0.041**
Lev	0.058	0.043	1.35	0.177*
Roa	-0.014	0.005	-2.80	0.005***
Loss	-0.039	0.034	-1.16	0.248*
Mtb	0.002	0.001	1.05	0.293*
Blnd	0.092	0.022	4.05	0.000***
Busy	-0.092	0.024	-3.85	0.000***
Be	-0.033	0.006	-5.04	0.000***
Weighted Statistics				
Number of obs	1147			
R Squared	0.4318			
Adjusted R-Squared	0.4206			
P-value	F(14,1132)= 2.62			
	0.0010			

Note: \*\*\*, \*\* and\* denote significance at 99%,95% and 90% respectively

**Table 14.****Fixed effects Regression (IT internal control weakness)**

variable	Coef	Std.Err	z	p-value
Cons	0.150	0.205	0.73	0.464*
Incap	-0.016	0.006	-2.43	0.015***
Soc	-0.100	0.027	-3.68	0.000***
Ais	-0.024	0.014	-1.72	0.089*
Bsf	-0.017	0.010	-1.67	0.095*
Bsi	0.047	0.036	1.29	0.198*
Age	0.001	0.001	1.51	0.132*
Size	0.005	0.002	2.44	0.015***
Lev	0.006	0.001	3.53	0.000***
Roa	0.021	0.007	3.05	0.002***
Loss	-0.372	0.171	-2.17	0.030**
Mtb	0.007	0.004	1.90	0.058**
Blnd	0.012	0.004	2.91	0.004***
Busy	-0.084	0.037	-2.22	0.026**
Be	-0.207	0.105	-1.98	0.049**
Weighted Statistics				
Number of obs	1147			
R Squared	0.0066			
Adjusted R-Squared	0.4667			
P-value	Chi2(14) = 19.93			
	0.1323			

Note: \*\*\*, \*\* and\* denote significance at 99%,95% and 90% respectively

**Table 15.**

**The results of the model for T+1**

variable	Coef	Std.Err	Z	p-value
Cons	-2.621	0.798	-3.28	0.001***
Incap	-0.010	0.003	-2.75	0.006***
Soc	-0.099	0.027	-3.61	0.000***
Ais	-0.035	0.017	-2.00	0.046**
Bsf	-0.130	0.041	-3.14	0.002***
Bsi	0.015	0.004	3.58	0.000***
Age	0.003	0.001	2.04	0.043**
Size	0.135	0.064	2.10	0.036**
Lev	0.006	0.002	2.72	0.006***
Roa	0.041	0.036	1.13	0.258*
Loss	-0.221	0.105	-2.10	0.036**
Mtb	0.003	0.002	1.21	0.226*
Blnd	0.029	0.008	3.42	0.001***
Busy	-0.023	0.013	-1.71	0.087*
Be	-0.244	0.092	-2.64	0.008***
Weighted Statistics				
R_Squared	0.0295			
Adjusted R-Squared	0.6428			
P-value	F(13,783)= 1.83			
	0.0348			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 16.****The results of the main model (Financial internal control weakness)**

variable	Coef	Std.Err	Z	p-value
Cons	2.430	0.554	4.39	0.000***
Incap	-0.058	0.020	-2.80	0.005***
Soc	-0.002	0.000	-4.27	0.000***
Ais	-0.129	0.056	-2.28	0.023**
Bsf	-0.131	0.065	-2.00	0.046**
Bsi	0.100	0.056	1.78	0.075*
Age	-0.031	0.009	-3.17	0.002***
Size	-0.137	0.008	-16.74	0.000***
Lev	0.144	0.069	2.06	0.039**
Roa	-0.047	0.023	-2.01	0.044**
Loss	0.028	0.014	2.04	0.042**
Mtb	-0.006	0.002	-2.88	0.004***
Blnd	0.128	0.087	1.47	0.143*
Busy	0.143	0.055	2.61	0.010***
Be	-0.010	0.002	4.86	0.000***
Weighted Statistics				
R_Squared	0.0804			
Adjusted R-Squared	0.5226			
P_value	F(13,952)=6.40			
	0.000			
F_Limer	F(181,952)= 4.11			
	0.000			
Hausman	Chi2(13)= 38.73			
	0.0002			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 17.**  
**Least Square Regression (Financial internal control weakness)**

variable	Coef	Std.Err	z	p-value
Cons	0.232	0.189	1.22	0.221*
Incap	-0.007	0.002	-2.93	0.000***
Soc	-0.350	0.083	-4.22	0.004***
Ais	0.049	0.029	1.67	0.095*
Bsf	-0.073	0.055	-1.33	0.185*
Bsi	0.084	0.041	2.06	0.040**
Age	0.000	0.000	0.89	0.375*
Size	-0.051	0.029	-1.77	0.083*
Lev	0.237	0.052	4.54	0.000***
Roa	-0.085	0.025	-3.42	0.001***
Loss	0.133	0.041	3.22	0.001***
Mtb	-0.010	0.002	-4.55	0.000***
Blnd	0.266	0.070	3.78	0.000***
Busy	0.202	0.028	6.99	0.000***
Be	-0.082	0.045	-1.80	0.072*
Weighted Statistics				
Number of obs	1147			
R Squared	0.5754			
Adjusted R-Squared	0.5059			
P-value	F(14,1132)= 11.12			
	0.000			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 18.**  
**Fixed effects Regression (Financial internal control weakness)**

variable	Coef	Std.Err	z	p-value
Cons	0.619	0.262	2.36	0.018***
Incap	-0.013	0.006	-1.96	0.050**
Soc	-0.000	0.000	-1.80	0.072*
Ais	0.092	0.042	2.19	0.029**
Bsf	-0.116	0.053	-2.19	0.028**
Bsi	0.092	0.057	1.60	0.110*
Age	-0.041	0.024	-1.72	0.089*
Size	-0.026	0.160	-1.65	0.099*
Lev	0.192	0.058	3.31	0.001***
Roa	-0.068	0.023	-2.89	0.004***
Loss	0.111	0.037	2.96	0.003***
Mtb	-0.010	0.002	-3.58	0.000***
Blnd	0.195	0.083	2.34	0.019***
Busy	0.181	0.053	3.39	0.001***
Be	-0.000	0.000	-2.36	0.018***
Weighted Statistics				
Number of obs	1147			
R Squared	0.0588			
Adjusted R-Squared	0.1549			
P-value	Chi2(14) = 96.08			
	0.000			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

**Table 19.**  
**The results of the model for T+1**

variable	Coef	Std.Err	Z	p-value
Cons	1.762	0.868	2.03	0.043**
Incap	-0.055	0.018	-3.03	0.002***
Soc	-0.002	0.000	-2.96	0.003***
Ais	-0.096	0.034	-2.78	0.006***
Bsf	-0.003	0.012	-1.92	0.054**
Bsi	0.004	0.001	3.21	0.002***
Age	-0.021	0.014	-1.50	0.133*
Size	-0.013	0.004	-2.81	0.005***
Lev	0.006	0.002	2.24	0.027**
Roa	-0.034	0.010	-3.32	0.001***
Loss	0.006	0.002	2.48	0.013***
Mtb	-0.010	0.003	-3.18	0.002***
Blnd	0.009	0.002	4.15	0.000***
Busy	-0.135	0.061	-2.20	0.028**
Be	-0.003	0.012	-1.92	0.054**
Weighted Statistics				
R_Squared	0.0480			
Adjusted R-Squared	0.2256			
P-value	F(13,783)= 3.04			
	0.0002			

Note: \*\*\*,\*\* and\* denote significance at 99%,95% and 90% respectively

#### Appendix 1.

##### The results of the Hadari test

Variable	Sig.	Variable	Sig.
INCAP	0.8213	ICW	0.5410
AIS	0.3029	SOC	0.5102
BSI	1.0000	BSF	1.0000
SIZE	1.0000	BLND	0.1908
BUSY	0.1892	LEV	0.9903
ROA	0.2257	LOSS	0.2099
MTB	0.1719	AGE	0.1384
BE	0.7655	ICWOF	0.5321
ICWF	0.3984	ICWIT	0.4091

#### Appendix 2.

##### The results of the Kolmogorov-Smirnov test

Variable	Sig.	Variable	Sig.
INCAP	0.000	ICW	0.628
AIS	0.000	SOC	0.937
BSI	1.000	BSF	1.000
SIZE	0.000	BLND	0.005
BUSY	0.033	LEV	0.004
ROA	0.000	LOSS	0.755
MTB	0.173	AGE	0.294
BE	0.000	ICWOF	1.000
ICWF	0.354	ICWIT	1.000

**Appendix 3.**  
**The results of the VIF test**

Variable	VIF	1/VIF
Size	1.53	0.653
Ais	1.36	0.733
Loss	1.25	0.799
Roa	1.20	0.834
Lev	1.18	0.846
Be	1.17	0.852
Mtb	1.16	0.864
Soc	1.14	0.875
Blnd	1.11	0.896
Age	1.05	0.956
Incap	1.09	0.918
Bsf	1.06	0.944
Busy	1.05	0.949
Bsi	1.03	0.967
Mean VIF	1.17	

**Appendix 4.**  
**The results of the sensitivity analysis**

	ICW	ICWOF	ICWIT	ICWF	INCAP	SOC	AIS	BSF	BSI	AGE	SIZE	LEV	ROA	LOSS	MTB	BLND	BUSY	BE
Icw	1.000																	
ICWOF	0.182	1.000																
ICWIT	0.306	0.073	1.000															
ICWF	0.221	0.157	0.039	1.000														
Incap	-0.080	-0.032	-0.043	-0.053	1.000													
soc	-0.305	-0.008	0.043	-0.013	0.056	1.000												
Ais	0.017	0.002	0.032	0.073	0.052	0.014	1.000											
Bsf	-0.038	0.008	-0.019	-0.074	0.043	-0.080	0.009	1.000										
Bsi	0.057	0.008	0.052	0.053	-0.056	0.003	0.023	-0.026	1.000									
Age	0.093	0.022	0.047	0.024	-0.045	-0.099	0.061	0.059	-0.072	1.000								
Size	0.105	0.001	-0.045	0.065	0.035	-0.111	0.489	-0.039	0.043	-0.021	1.000							
Lev	0.044	0.087	0.033	0.166	0.009	-0.007	0.066	-0.029	0.072	0.056	0.074	1.000						
Roa	-0.058	-0.046	-0.032	-0.073	0.198	0.052	0.104	-0.016	0.033	-0.030	0.081	-0.040	1.000					
Loss	-0.153	0.083	-0.007	0.145	-0.105	0.239	-0.068	-0.033	-0.028	0.034	-0.099	0.280	-0.163	1.000				
Mtb	0.059	-0.053	0.039	-0.120	-0.001	0.029	-0.031	-0.035	-0.023	0.042	-0.123	-0.088	-0.288	-0.066	1.000			
Blnd	-0.030	-0.061	0.008	0.053	0.089	0.133	-0.022	-0.036	-0.107	-0.106	-0.082	-0.224	0.063	-0.083	-0.047	1.000		
Busy	0.004	0.024	-0.106	0.186	0.097	0.040	0.053	-0.153	-0.012	0.001	-0.001	-0.008	0.037	0.005	0.075	0.014	1.000	
Be	-0.009	-0.021	-0.010	0.025	-0.071	0.000	0.162	-0.106	-0.034	-0.021	0.033	-0.059	0.023	0.019	-0.007	-0.004	-0.060	1.000

Journal of Islamic Accounting and Business Research

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 51
- 52
- 53
- 54
- 55
- 56
- 57
- 58
- 59
- 60