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**Factors Affecting Financial Instruments Disclosure in Emerging economies: The Case
of Jordan.**

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Abstract:

The current study investigates factors affecting Financial Instruments (FI) disclosure for a sample of Jordanian listed companies (82 firms) over two consecutive years (2013 and 2014). An un-weighted disclosure index is used to examine the extent of FI disclosure. In addition, the study employs a number of multiple regression models to examine the determinants of FI disclosure. The findings indicate that the level of FI disclosure provided by the sample firms is relatively low with only 52% of FI-related items being supplied. In addition, the results illustrate that the level of FI-related disclosure has a statistically positive association with firm size, the audit firm employed and corporate governance attributes. However, the current study fails to document significant associations between FI disclosure and firm industry or ownership structure variables. This research provides a number of insights for policy makers. First, the results of the current study could help the IASB when revisiting FI-related accounting standards to consider an emerging country's perspective. In addition, it provides some insights to accounting regulators in Jordan about how Jordanian listed firms respond to IFRS 7 requirements.

Keywords: Financial Instruments, Corporate Disclosure, Corporate Governance, Jordan.

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1. Introduction

FI-related items comprise about 90% of the components of a firm's financial statements; hence, their influence on a firm's financial position, cash flows and performance is substantial (Bischof, 2009). Nevertheless, the extant literature has generally focused on the determinants of corporate disclosure in general (Wallace, 1988; Cooke, 1989a; Forker, 1992; Nichols and Street, 2007) rather than on FI disclosure. In fact, very few studies examined the determinants of FI disclosure (Chalmers and Godfrey, 2004; Bischof, 2009). An analysis of the corporate reporting literature suggests that several factors influence a firm's decision to provide information about its operations, financial position and performance including firm size, industry, the audit firm employed and corporate governance mechanisms used. Indeed, rationales behind the supply of accounting information are advanced in several theoretical models. Specifically, stakeholder theory, agency theory, legitimacy theory, political economy theory and signalling theory offer insights about why firms publish information about their activities (Watts and Zimmerman, 1990; Owusu-Anash, 1998; Akhtaruddin, 2005). Although a variety of arguments are discussed by these different theoretical perspectives, they all agree that firms disclose information to meet the needs of different user groups such as investors, creditors, analysts and other stakeholders in order to enhance individuals' decision making capabilities (Cooke, 1989b).

Previous studies about FI disclosures have focused on examining the quantity of FI disclosure and the factors affecting the provision of such information. The only exception to this generalization is the study by Lopes and Rodrigues (2007) which analysed the determinants of voluntary FI disclosure provided by Portuguese listed firms as compared to that required under the International Accounting Standard (IAS) 32 and IAS 39. However, the current study adopts a different perspective to study the phenomena that is being

addressed. It examines the association between mandatory FI disclosures and firm characteristics under the requirement of IFRS 7; this accounting standard reclassified and expanded on the FI disclosures which firms must provide. In general, the extant literature in this area has focused on developed countries and larger developing countries in the Middle East have not usually been considered. Yet, the corporate usage of derivatives among Middle Eastern firms (especially large companies) has risen dramatically (Al-Rai, 2004). For example, the growing reliance of the Jordanian economy on external exports has forced companies to increase their usage of FI products (mainly derivatives) in order to maintain the stability of their cash flows and smooth revenues (Siam and Abdullatif, 2011). Using a questionnaire survey, Alshbiel and Tahat (2014) indicate that 60% of Jordanian non-financial listed firms now use FIs in their operations.

Indeed, Jordan provides an interesting research context in which to examine the current state of Jordanian firms' compliance with IFRS 7 disclosure requirements and what factors affect such disclosure. Specifically, Jordan has experienced significant changes in its financial and economic environment over the last few decades where the government undertook important capital market reforms in order to boost the private sector, expand the economy and attract foreign investments. These reforms resulted in the establishment of the Amman Stock Exchange (ASE) in 1999. In addition, the government introduced a number of business laws (including the Companies Law of 1997 and the Securities Law of 2002) in order to facilitate economic development. These enactments resulted in substantial changes to the accounting and disclosure requirements of listed companies in Jordan; they had to adopt IASs/ IFRSs. Finally, Jordan has joined a number of worldwide economic organizations (e.g., the WTO) that require listed companies to make their financial information publicly available. Given such major changes to Jordan's business environment and regulatory developments as well as the increasing usage of FIs, it is believed that an

investigation of the factors affecting the provision of FI-related information under a newly introduced accounting standard (IFRS 7) is timely.

The remainder of the paper is organized as follows. Section 2 discusses the regulatory framework governing corporate disclosure in Jordan. Section 3 presents a review of the literature and outlines the theoretical framework employed. The research design is described in Section 4. Section 5 discusses the results of the current investigation. Finally, the conclusions, policy implications and directions for future research are provided in Section 6.

2. Financial Background about Jordan

2.1 Institutional Background

Jordan is classified by the World Bank as an upper middle income country with a population of 9.5 million and a Gross Domestic Product (GDP) per capita of \$6,000 (ASE, 2015). The real GDP of the country has increased steadily over the last two decades, peaking in the 1990s with an average growth rate of 7% per year before falling to 3% over the last five years due to the global financial crisis. In order to develop an open market economy, the government has implemented a comprehensive economic reform programme including the establishment of the Amman Stock Exchange (ASE) in 1999 (Al-Omari, 2010). Since then, the number of listed companies has increased dramatically, reaching around 275 in recent years. In addition, market capitalisation has risen considerably from \$4.9 billion in 2000 to \$30.0 billion in 2015. Currently, Jordanian listed firms are drawn from a wide range of sectors including the financial, services and manufacturing industries. The financial sector dominates the exchange and accounts for 60% of the ASE's market capitalisation. The industrial sector is ranked second with 25% of the total market value, and the service sector is third with 15% of market capitalisation.

In the early 1990s, the Government launched a privatisation programme which resulted in a reduction in the State's shareholding in public companies to less than 6% compared to about 70% previously (Al-Kheder et al., 2009). This reduction in the government's stake led to an increase in the market capitalisation of the ASE to over \$35.0 billion in 2008, as state-owned shares were offered for sale to the public (Executive Privatization Unit, 2007).

2.2 The Financial Reporting Framework in Jordan

The legal framework of corporate disclosure in Jordan is represented by various Company and Security Acts. In particular, the Company Act of 1964 was the first piece of legislation which included guidelines for the preparation of financial statements. This was followed by the Company Act of 1989 which reaffirmed the requirements of the Company Act 1964 as well as expanding on the corporate disclosures which companies had to supply. Although both Acts required companies to prepare a profit and loss account and a balance sheet according to Generally Accepted Accounting Principles (GAAP), neither of them defined or specified the GAAP to be used. In 1989, the Jordanian Association of Certified Public Accountants (JACPA) was established as a local professional accounting body. Indeed, JACPA played an important role in facilitating the adoption of IASs within Jordan; by 1990 it recommended that all Jordanian companies should adopt IASs. However, the absence of any legal or professional mandate to implement IASs allowed firms to choose whichever GAAP they wanted to adopt. In 1997, the Company Act No. 22 was introduced. The new Act covered a wide range of issues relating to corporate disclosure requirements. In a clear statement, it argued that Jordanian listed companies' financial statements should be prepared in accordance with IASs/ IFRSs (Article No. 46). The Securities Act No. 76 of 2002 reaffirmed that Jordanian listed companies should apply IASs/ IFRSs in the preparation of their financial statements with penalties (including fines and delisting) for non-compliance. However, the maximum sanction a company typically receives for non-

compliance currently tends not to exceed the receipt of a warning letter (e.g. Mardini et al., 2015).

In summary, the Company Act No. 22 of 1997 was a turning point for corporate disclosure in Jordan since it provided guidance on financial disclosure. Furthermore, this Act of 1997 established: (i) the Jordan Securities Commission (ASE, 2010); (ii) the Securities Depository Centre; and (iii) the ASE. The Act also provided the first recommendations about the corporate governance structure of Jordanian listed companies; it sought to protect the rights of shareholders and highlight the responsibilities of Boards of Directors. For example, the Act mandated that all public shareholding firms should have an audit committee comprised of three non-executives directors (ROSC, 2004).

Jordan has traditionally been classified as a code law country (ROSC, 2005) where the financing of companies has largely involved bank debt (Abu-Nassar, 1993); the basic rights of shareholders to participate in company decisions and vote at the annual general meeting were not strong and the security associated with the registration of ownership was weak. However, the legal system of the country has developed as a result of the wide-ranging economic reforms that have been undertaken. Al-Akra et al. (2010) concluded that following these reforms, the Jordanian legal system has shifted towards a common law system; investor protection has improved, the capital market represents the main source of corporate financing for listed firms and users are provided with more timely public information. Jordan provides an interesting research setting for investigating FI disclosure under IFRS 7. In particular, since 1997, Jordan has mandated that IASs be adopted within listed companies; thus, the users of financial statements and decision makers are familiar with IASs and their implications. Moreover, the country has grown rapidly and many foreign investors have invested in the ASE. In addition, the business environment of Jordan

makes the country an interesting location for investigating new accounting standards such as IFRS 7 due to FI usage associated with the sizeable exports.

3. Literature Review and Hypotheses Development

A large body of accounting research has been generally examined corporate disclosure. However, there has been a dearth of FI-related disclosure studies and those that have been undertaken have mostly been conducted in the West. Indeed, disclosure about FIs is one of the most important and complex issues facing major accounting regulators around the world. For example, there were major disagreements between different parties that influenced the development of accounting standards in this area such as the IASB, National Standard Setters, Auditors, Accountants, Financial analysts and other stakeholders (Chatham et al., 2010). In this regard, Chatham et al. (2010) reviewed 168 comment letters in response to a Financial Instrument Discussion Paper that was issued by IASB in 1997. The biggest concerns among respondents related to the issue of flexibility; indeed, a sizeable number of respondents stated that the previous FI-related Exposure Drafts were too inflexible, whereas the new ones' permitted too many alternative treatments for FIs. In addition, a content analysis of the respondents' letters revealed concerns over the requirements of the Financial Instrument Discussion Paper that all FIs should be measured at their fair values. Further analysis showed that interested parties also expressed concerns with respect to the difficulty faced by companies when implementing FI-related proposals, in general, and the fair value accounting treatment in particular.

Gebhardt et al. (2004) examined the impact of various accounting treatments for FIs in the German banking sector; they analysed different sets of accounting rules for FIs such as the previous IASs (30, 32 and 39), the current IFRSs (IFRS 7 and 9), US GAAP and a Full Fair Value model which was developed by a FASB-IASB Joint Working Group. Their findings indicated that if a fully hedged bank uses the previous IAS or the Full Fair Value model,

then their financial statements reflected their economic results. However, under the previous IAS, banks had a choice about whether to disclose their hedging activities; in particular, banks could therefore manipulate the information that they wanted by selecting a non-disclosure option.

In another study, Lopes and Rodrigues (2008) used a sample of EU listed companies to compare existing practices concerning FI disclosure as compared to that required under IAS 32 and IAS 39. They found that (i) about 50% of the companies used fair value rules for financial assets held for trading as required by IAS 39, but they did not apply this criterion for those financial assets available for sale; (ii) the majority of companies disclosed their fair value measurement method; however, the disclosure relating to derivatives was very low; and (iii) large companies with sophisticated accounting systems and disclosure practices had difficulties in accounting for FIs and their related disclosures. Using a disclosure index approach, Darus et al. (2012) examined FI disclosure pre- and post- the implementation of the Australian Accounting Standard (AASB 1033): “Financial Instruments: Presentation and Disclosure”. The findings showed a significant increase in voluntary disclosures after the adoption of the new standard. Moreover, they discovered that a firm’s growth opportunities had an impact on limiting voluntary disclosures before the new standard was implemented.

A growing number of studies have examined the level of FI disclosure and its relationship with firm characteristics (e.g., firm size, industry, auditing firm, liquidity, leverage, ownership structure and corporate governance). For example, Birt et al. (2013) investigated the factors influencing the extent of FI Disclosure for sample of Australian extractive companies. They pointed out that the most common types of FI-related derivatives used for hedging purposes were forward rate agreements and options. They also indicated that the amount of derivatives employed was statistically aligned with financial risk, firm size and

the level of a company's leverage. In another study, Chalmers and Godfrey, (2004) found that firm reputation, size, industry and media attention had a positive impact on a firm's level of FI-related voluntary disclosure. In addition, Hassan et al. (2006; 2007) provided evidence that firm size, the price earnings ratio and the ratio of debt to equity had a significantly positive association with the level of derivative disclosure. More recently, Lopes and Rodrigues (2007) detected a positive association between firm size, industry and listing status and the level of FI disclosure¹.

The main aim of this paper is to investigate the current state of FI disclosure in Jordan, and to identify the factors affecting the supply of such information. Since the vast majority of academic work conducted in this field relates to developed countries, the present study may provide some insight for policy-makers concerned with FI disclosures in an emerging economy country such as Jordan and in turn enable them to review the appropriateness of their requirements. This study also contributes to our existing knowledge in the area of FIs and IAS/IFRS by identifying attributes which enhance the level of FI-related information provided by listed companies. Specifically, the empirical research undertaken in the current study provides a great deal of information on FIs which has not previously been investigated in Jordan.

3.2 Hypotheses Development

Company Size

Accounting theory suggests that firm size is likely to positively influence mandatory disclosure practices. Large firms typically operate with many administrative and

¹ Chavent et al. (2006) introduced a clustering method that split the sample of their study into homogeneous sub-groups corresponding to disclosure patterns (rather than level of disclosure) and firm characteristics; they used a sample of large French firms in their study. They found that the disclosure pattern associated with their sub-groups was related to provision intensity, size, leverage and market expectation, but not to profit, return and industry. Hassan et al. (2008) indicated that a positive relationship existed between FI disclosure and firm size, leverage and the existence of a risk management committee.

operational units in different parts of the world; thus, the management of such firms needs an advanced internal information system in order to enable the entities to make strategic and operational decisions (Mardini et al., 2012). Since such information already exists for internal purposes, the incremental costs of publicly providing non-proprietary data is thought to be minimal (Ahmad and Nicholls, 1994; Darus et al., 2012). Accordingly, it is expected that information costs decrease as firm size grows which increases the likelihood of a company supplying more FI disclosures². This argument suggests that the opportunity costs of a comprehensive disclosure policy are greater for larger firms than smaller ones. Thus, smaller firms may disclose less information than their larger-sized counterparts. Finally, agency costs tend to rise as firm size increases, and to reduce such costs, management may choose to increase the level of corporate disclosure (Chow and Wong-Boren, 1987; Hassan et al., 2006-2007; Darus et al., 2012). Based upon this line of argument, it can be hypothesised that large Jordanian listed firms have greater incentives to supply FI-related information. Hence, the first hypothesis is developed:

H1: Larger firms are expected to have a higher level of FI disclosure than their smaller sized counterparts.

Audit Firm Size

It has been argued that the disclosure policy can be influenced by the external audit firm appointed (Benston, 1982). Fama and Jensen (1983) suggested two reasons why large audit firms have a competitive advantage over small audit firms in detecting reporting errors or non-compliance with accounting regulations. They argued that the sizeable client list of large audit firms reduces their dependency on any one client; this, in turn, leads them to report any kind of errors or mis-statements, and to make sure that clients comply with statutory and regulatory reporting requirements (Raghunathan et al., 1994; Jaffar, 2009;

² For instance, information generation and dissemination are costly exercises; thus, it is more likely that large firms will have the resources and expertise necessary for the production and publication of more comprehensive disclosures about the different units within their organisations. Hence, disclosure policy can put small firms at a competitive disadvantage compared to their larger counterparts. (Lang and Lundholm, 1993; Chalmers and Godfrey, 2004; Lopes and Rodrigues, 2007).

Deumes et al., 2013). Indeed, the desire to maintain a reputation for probity among large audit firms may lead them to encourage disclosure among their clients.

Owusu-Anash (1998) argued that large audit firms invest heavily to maintain their reputation as providers of a quality audit relative to their small firm counterparts. Consequently, large audit firms have greater incentives to resist client pressures for the lax application of accounting regulations. Therefore, a firm's choice of auditor is likely to be associated with the decision to disclose more information (Craswell and Taylor, 1992; Deumes et al., 2013). Furthermore, auditing may be seen as a way of reducing agency costs (Watts and Zimmerman, 1986; Jaffar, 2009). Accordingly, it can be argued that large companies have substantial agency costs which they try to reduce by contracting with Big-4 audit firms (Craswell and Taylor, 1992; Ahmad and Nicholls, 1994; Inchausti, 1997; Suwaidan et al., 2007; Jaffar, 2009; Deumes et al., 2013). Thus, the second hypothesis is developed:

H2: Companies audited by the Big-4 audit firms provide more FI disclosure than those reviewed by other audit firms

Firm Industry

Accounting policies may vary across industries; indeed, a firm's industry influences the corporate reporting culture (Inchausti, 1997). As a result, it is argued that disclosure policy will differ from one industry to another. Such a difference is often justified using political costs theory. Watts and Zimmerman (1986) suggested that industry membership probably influences the political vulnerability of a firm to regulation; the monitoring of companies in high profile sectors may ensure that a great deal of information is disclosed (Mardini et al., 2015; Suwaidan et al., 2007; Darus et al., 2012; Owusu-Anash, 1998; Inchausti, 1997). In the current study, the authors hypothesise that the sectorial membership

of a particular company influences its level of FI disclosure. Hence, the third hypothesis is proposed:

H3: Sector membership explains FI disclosures

Corporate Governance

Agency theory believes that the corporate governance structure of a company may be associated with its reporting practices, specifically with its disclosure levels. In particular, boards with a higher proportion of outside or independent directors will increase the monitoring of management because they are not affiliated to any internal parties from the company (Weir and Laing, 2003; Chau and Leung, 2006; Klai and Omr, 2011; Ho et al., 2013). Prior studies have also found that the presence of independent directors on boards may improve the quality of financial statements and corporate disclosures (Chen and Jaggi, 2000; Xie et al., 2001; Cheng and Courtenay, 2004; (Samaha et al., 2012; Al-Moataz and Hussainey, 2010; Mardini, 2015). For example, Mak and Li (2001) examined the determinants and interrelationships among corporate ownership characteristics and boards of directors using a sample of Singaporean listed firms. The study found that corporate ownership and board structures are related. The proportion of outside directors was negatively related to managerial ownership, board size and government ownership. In terms of corporate governance, firm characteristics and levels of corporate disclosure, Samaha et al. (2012) assessed the impact of corporate governance attributes (board composition, board size, CEO duality, director ownership, block-holder ownership and the existence of audit committee) on the extent of corporate disclosure using a sample of Egyptian listed companies. They found that the level of corporate disclosure is lower for companies with a dual CEO and higher ownership concentration as measured by block-holder ownership; while disclosure increases with the proportion of independent directors on the board and firm size. More recently, Mardini (2015) determined that corporate governance mechanisms (ownership concentration, board size, CEO/chairperson duality) had an effect

on the level of disclosure provided by Jordanian banking listed companies in the context of agency theory.

Thus, the board composition may be an interesting variable to consider because it will reflect the role of independent directors. Indeed, more disclosure can be expected from companies with a higher proportion of independent directors. On the other hand, if the board has a high proportion of non-independent directors, less disclosure can be expected since they have access to inside information. Jordanian companies are family managed, and have a sizeable overlap between ownership and management. As such, if the board includes relatives of shareholders, they do not have to rely extensively on public disclosure since they have access to internal information. Based on this argument, the fourth hypothesis is developed

H4: The degree of disclosure is predicted to be higher the greater the proportion of independent directors on the board.

Ownership Structure

It is assumed that a wide dispersion of a company's share ownership and a high proportion of equity owned by management are associated with a company's willingness to comply with mandatory disclosure rules (Mardini, 2015). This proposition is explained in terms of positive accounting theory where modern companies are characterized by a separation of ownership and control. This arrangement for corporate control generates agency costs resulting from the conflicting interests between (i) management and owners, and (ii) across different classes of owners (Al-Moataz and Hussainey, 2010; Samaha et al., 2012; Klai and Omr, 2011; Ho et al., 2013). In other words, the greater the percentage of stocks owned by top managers, the more likely it is that they make decisions consistent with maximizing a company's wealth and providing transparent financial statements in order to optimise the current share price (Mak and Li, 2001).

The complementary view asserts that professional managers of such companies have greater incentives to engage in bonding activities to reassure shareholders that they will be acting in their (shareholders') interest. The provision of adequate information to shareholders through the annual report is one element of such bonding activities (Jensen and Meckling, 1976; Watts, 1977). Since the management probably already produces much of the desired information for internal decision making purposes, the marginal cost of making this information available to outside users is likely to be lower than for other alternatives. Hence, the tendency for a company with a substantial number of public individuals on among its investors to adequately disclose information in its annual report is likely to be high in order to minimise agency costs. However, in countries where the State (e.g., China and Singapore), banks (e.g., Germany and Japan) or certain families (e.g., Hong Kong) have substantial equity holdings or where equity ownership is highly concentrated, there is generally little or no physical separation between those who own, and those who manage a business (Wallace, 1988, Wallace and Nasar, 1995; Mak and Li, 2001). In such cases, capital owners have greater access to internal information about their company, and may not have to rely on public disclosures to monitor their investments. Thus, demand for adequate disclosure and reporting is generally low in such situations. Based upon the previous argument, the fifth hypothesis is proposed

H5: The extent of corporate FI disclosure is associated with a firm's ownership structure.

Existence of an Audit Committee

FIs expose firms to "financial, economic and operational risks" (Hassan et al., 2008, p.9). An audit committee is a subcommittee which works under the board of directors to manage company audit matters – including those associated with FIs. Specifically, the main purpose of the audit committee is to assist the board in overseeing a firm's audit practices if these are not assigned to the risk management committee (Fraser and Henry, 2007); in

some firms, the audit committee may establish a risk management committee. According to Hassan et al. (2008), an audit committee exists to ensure that the management of a firm is aware of the risks that it is taking on, as well as ensuring that the firm discloses information relating to these risks (including those associated with FIs) in the annual reports. Indeed, setting up an audit committee within a firm indicates that a firm is putting some effort into addressing issues relating to risk management matters within the company. Thus, the existence of an audit committee may signal that the firm is taking the issue of risk, accounting and auditing practices into consideration for decision making purposes. This argument leads to propose the final hypothesis:

H6: The existence of an audit committee enhances FI disclosure

4. Research Design

4.1 Sample Selection

The current paper investigates factors affecting the extent of FI disclosure provided under IFRS 7 by Jordanian listed companies for two years; 2013 and 2014. The sample initially consisted of all ASE listed firms (227 companies) which issued annual reports during the period of the current investigation. However, some of these firms had to be excluded for various reasons. First, the study omitted companies listed in the second market (132 firms). The second market in Jordan represents firms whose shares are not actively traded in the ASE; the volume of transactions in these securities is quite small (ASE, 2007); this means that the demand for corporate information about such firms is low; thus, they tend to disclose relatively little information. Second, the study also excluded 13 additional companies from the sample; 7 of these companies had incomplete financial statements while the remaining 6 had no annual reports available. The final sample of the current study includes 82 companies over two years (2013 and 2014) resulting in 164 observations.

4.2 Measurement of Financial Instruments Disclosure

In the current study, the extent of FI disclosure provided by Jordanian listed companies is measured using a disclosure index. The disclosure index was constructed by the researchers based on the requirements (FI disclosure items) of IFRS 7. In addition, the study consulted the Big-4 accounting firms' checklists of that standard as well as the extant literature on FI disclosure to ensure that the checklist was comprehensive (e.g., Bischof, 2009; Bamber and McMeeking, 2010). Thus, the number of items included in the current study's index was determined by the standard itself and subsequently assessed by the researchers. The disclosure index checklist includes 56 items spread across 7 categories of information (see Appendix 1). Each company's annual report was scanned for these items and measured using an un-weighted disclosure index. Aly et al. (2010) noted that a majority of studies in this field have used an un-weighted disclosure index. Indeed, Cooke (1989a) has argued that un-weighted indices are a suitable research instruments in corporate disclosure studies when the research is focused on all groups who use a company's annual report rather than the requirements of any specific user category. Hence, the level of FI disclosure (FID) is measured using the following equation:

$$FID_j = \sum_{i=1}^n L_i \quad [1]$$

where L is one if the item i is disclosed and zero otherwise; n is number of items which has an upper limit of 56 in the current study. The main problem with the disclosure index approach is that each item included in the index may not necessarily be relevant for all companies. In order to tackle this problem, the annual reports were read twice by the researchers to confirm the total possible disclosure score for each individual company, and this company-specific total was used to calculate a company-specific disclosure score. Thus, the disclosure score was tailored to differentiate between non-disclosure of a relevant item which attracted a score of 0 and non-disclosure of irrelevant items which were marked as "Not applicable" (N/A). An item was considered relevant for a company if it was appropriate to its operations; non-applicable items were removed from the index for each

company-specific disclosure. Hence, the percentage of overall FI disclosure level (POFID) for each company is measured as follows:

$$POFID_j = \sum_{i=1}^n L_i / N_i \quad [2]$$

N is the total number of applicable items to each firm.

In order to increase the reliability of the analysis, the current study performed a test of internal consistency for both the items and the categories included in the index. The results suggest that there is a high level of internal consistency (reliability) in the disclosure index as a measure of FI information provided by Jordanian listed companies in the current research. In addition, a sample of annual reports was read by more than one researcher to check on the reliability of the coding used. This strategy was employed to ensure that the scoring was consistent and to avoid any mistakes with the coding before the index results were analysed and the findings examined. Moreover, the validity of the disclosure index checklist was evaluated in the current study. A construct validity test was performed by examining the correlation between the percentage of the overall FI disclosure and a number of firm characteristics. The results of the correlation test between FI disclosure and these firm characteristics were consistent with the findings from the extant literature indicating that the disclosure index of the current study is validly constructed.

4.3 Measurement of the Independent Variables and the Regression Model

Previous studies in this area have considered many different choices when measuring firm characteristics. Table 1 explains the various proxies used to measure independent variables examined in the current study. First, company size has been measured as market capitalisation, total of assets or total sales. The current study uses the market capitalisation measure to proxy for company size; indeed, this measure of company size has been widely employed by prior studies because of its stability as compared to other measures. A log

transformation was applied to this firm size variable in order to make the data more normally distributed. The status of the company's audit firm was measured via a dummy variable which took on a value of 1 if the auditor was one of the Big-4 audit firms and 0 otherwise. A dummy variable was also used to measure industry membership where a value of 1 was given if the company was a financial firm, a value of 2 was used if the company was a service company, and a value of 3 was employed if the firm was in the manufacturing sector. Ownership structure (OS) is measured as the percentage of concentration among the sample firms (see Table 1). The corporate governance (CG) variable is measured using two proxies: the independence of the Board of Directors (BoD) and the presence of an Audit Committee (AC). Independence among the BoD is measured as the proportion of independent members on the board while AC is measured with a dummy variable which takes a value of 1 if the company has such a committee and 0 otherwise.

Insert Table 1 here

In order to examine the relationship between the dependent and independent variables, a multiple regression model was developed. The model examines the relationship between the POFID and firm characteristics.

$$POFID = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 1)}$$

Where:

POFID refers to the percentage of overall financial instruments disclosures, Log Size refers to the logarithm of a company size, AuD is the Accounting firm, IND refers to the industry sector, CG_BoD refers to the corporate governance, OS is the ownership structure, and CG_AC indicates the audit committee

Examining the association between the percentage of overall FI disclosure and firm characteristics may not uncover any significant relationship. Hence, the current study examines the association between the sub-categories of FI disclosures which are included

in the disclosure index employed in the current study and firm characteristics. There are seven sub-categories of FI disclosure: namely, (i) accounting policies of FIs (APD); (ii) balance sheet disclosures of FIs (BSD); (iii) income statement disclosures of FIs (ISD); (iv) hedge disclosure of FIs (HD); (v) fair value disclosures of FIs (FVD); (vi) risk disclosure of FIs (RD); and (vii) other FI-related disclosures (OD). Accordingly, the following regressions (Models 2 to 8, respectively) are tested:

$$APD = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 2)}$$

$$BSD = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 3)}$$

$$ISD = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 4)}$$

$$HD = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 5)}$$

$$FVD = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 6)}$$

$$RD = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 7)}$$

$$OD = \alpha_0 + \alpha_1 \log Size + \alpha_2 AuD + \alpha_3 IND + \alpha_4 CG_BoD + \alpha_5 OS + \alpha_6 CG_AC + \varepsilon_{it} \text{ (Model 8)}$$

5. Results and Discussion

5.1 Descriptive Statistics

Table 2 provides summary statistics for FI-related information disclosed by the sample firms. In general, the results reveal that FI disclosure compliance was relatively poor among the listed companies. Specifically, the table indicates that Jordanian listed companies published, on average, 52% of FI-items of information investigated (PFID). This percentage of aggregate FI disclosure varied among companies from a low of 12% to a high of 95%. This variability was also present in the sub-categories of FI disclosure. Table 2 indicates that Fair Value Disclosure represented the highest level of disclosure with 83% of related items supplied on average. On the other hand, the lowest level of FI disclosure was in both the Other Disclosure and Hedge Disclosure categories with 14% and 16% of relevant items published in the financial statements, respectively. Other sub-categories of FI were in between these two extremes. For example, 60% of Risk-related items were published, while over 70% of Accounting Policies and Balances Sheet related information was provided.

Table 3 provides information about the independent variables examined in the current study. A visual inspection of this table reveals that the average company size was JD8.50 although there was some variability in the total market capitalisation measure across the sample; the standard deviation for this variable was JD0.11³. A further analysis of the table shows that 26 of the sample companies were audited by the one of the Big-4 firms, while 56 companies were audited by other national auditing firms. A further inspection of the table indicates that the sample firms included 38 financial, 18 service and 26 manufacturing firms. With respect to the corporate governance variables, Table 3 shows that the typical Board of Directors had a mean of 0.40 independent members with a standard deviation of 0.15. In addition, the table reveals that around 75% (61 out of 82) of the sample firms had an audit committee. Finally, the table shows that 50 of the sample firms experienced less than 30% ownership concentration, 9 companies had a concentration level of between 30% and 50%, while 13 had an ownership concentration of more than 50%.

Insert Table 2 and 3 here

5.2 Results

This section reports the results from a regression analysis of the relationship between FI disclosure and firm characteristics for Jordanian listed companies. Prior to running the regression analysis between the dependent variables and the independent variables, a correlation test was conducted. Table 4 provides the results of the Spearman Correlation test between the variables investigated in the present research. An analysis of this Table reveals that a majority of the correlation coefficients were small; although a few sizeable values were uncovered, most of them under 0.70⁴. An inspection of the some significant correlations reveals that the PFID measure was positively associated with a firm's size,

³ The measurement unit is the Jordanian Dinner (JD) which was about 1.5 US\$ during the time period of the study.

⁴ In order to ensure that the study's analysis was free from statistical errors, a multicollinearity diagnostic test was performed; the results indicates that multicollinearity was not present in the current study where the Variance Inflation Factor values ranged between 1 and 5. Further, the study controlled for the possibility that the variance of the error term might not be constant using White's (1980) procedure; the results indicated that heteroskedasticity was not present in the models examined and there was no material changes in the results when White's (1980) heteroskedasticity-consistent standard errors were used.

profitability, liquidity and the presence of a Big-4 auditor. On the other hand, it was negatively associated with the industry variable. The remaining significant correlations among the independent variables suggest that the presence of multi-collinearity will need to be investigated in any regression analysis. In order to test the hypotheses proposed by the current paper, a multiple regression analysis was performed to examine the association between the level of FI disclosure and firm characteristics.

Insert Tables 4 and 5 here

Model 1 in Table 5 provides the results from testing the association between PFID and firm characteristics. An inspection of the table reveals that PFID has a significant and positive relationship with the company size, audit firm and corporate governance variables. Specifically, Model 1 in Table 4 shows that firm size is statistically associated with the extent of FI disclosure published by Jordanian listed firms; it has a coefficient of 2.410 and a p-value of less than 0.01. In addition, Table 4 reveals that corporate governance variables are positively and significantly associated with the PFID variable. In particular the BoD and the AC had coefficients of 1.210 and 0.782 and p-values of less than 0.05. In addition, Table 5 indicates a statistically significant positive association between PFID and OS with a coefficient of 1.156 and a p-value of less than 0.05. In general, Model 1 seems to be a good fit since it explains a significant proportion of cross-sectional differences in the PFID variable with an adjusted R^2 of 0.52. The F-statistic shows a positive and significant value of 6.538 and a p-value of less than 1% rejecting the null hypothesis that the model cannot explain PFID. No significant associations were evident between PFID and each of industry membership⁵ and the ownership structure variables (see Table 5).

Table 6 reports the results from testing the association between the sub-categories of PFID (reported in Table 2) and firm characteristics (model 2 to Models 8). Model 2 in Table 6

⁵ In order to gain a deeper insight into the association between FI disclosure and firm industry, the study performed a Chi-squared test. Consistent with the regression analysis, the results show no significant impact of firm industry on FI disclosure.

reports the results from examining the association between Accounting Policies Disclosure (APD) and firm characteristics; an analysis of Model 2 reveals that APD is significantly and positively associated with firm size, audit firm, BoD and AC with coefficients of 5.810, 1.770, 3.490 and 1.532 (respectively); all of the p-values are less than 0.05. The F-statistic shows a significant value of 9.213 and a p-value of less than 1% rejecting the null hypothesis that independent variables do not explain the POFID. However, Model 2 explains a lower proportion of FI disclosure than Model 1; specifically, it has an adjusted R^2 of 0.21. Consistent with Model 1 (Table 5), Model 2 report an insignificant relationship between APD and industry membership. Overall, the results provided in Table 6 (Model 2 to Model 8) are similar to those presented in Table 5 (Model 1). However, some differences present. For example, while the APD variable had a significant association with almost all sub-categories of PFID, this was not the case with the HD variable where insignificant association was reported with a coefficient of 1.433 and a p-value greater than 0.05. Some other sub-categories show similar behaviour in relation to firms characteristics examined (see Table 6). In terms of the explanatory power of Models 2, 3, 4, 5, 6, 7, and 8, the Adjusted R^2 ranged from a low of 12 (OD variable) to a high of 0.33 (BSD variable).

Insert Table 6 here

An analysis of the results reveals that firm size tends to be statistically associated with FI disclosure across all models examined in the current study. This finding is consistent with Chalmers and Godfrey (2004), who also document a significantly positive relationship between size and FI disclosure. However, this result is inconsistent with a number of studies where the company size variable is insignificant (Glaum and Street, 2003; Hodgdon, 2004; Street and Bryant, 2000; Street and Gray, 2001; Tower et al., 1999). One possible explanation for the difference is that firm size is more heterogeneous among the current Jordanian sample than in other studies of developed countries. In addition, a significant association between the audit firm and FI disclosure is found in in the present

paper. This finding is consistent with Hodgdon (2004), Glaum and Street (2003) and Street and Gray (2001), who document a positive significant relationship between IAS compliance and the type of auditor engaged. Chalmers and Godfrey (2004) and Abd-El salam and Weetman (2003) find mixed results regarding this variable. Surprisingly, the current study provides strong evidence about the relationship between the corporate governance variable and FI disclosure. This evidence is inconsistent with Lopes and Rodrigues (2007) who failed to find such a result. Another explanation for the results of the current study may be the context of Jordan. Accounting is the product of its environment, institutional socioeconomic and political conditions can result in different accounting and disclosure practices (Williams and Tower, 1998). Hence, differences between the results reported in the present paper and previous research could be attributed to Jordan's institutional settings which are discussed in Section 2 especially its economic reforms and the political developments within the country.

6. Conclusion

The primary objective of this paper is to examine factors influencing FI disclosure provided by Jordanian listed companies. The findings reveal that firm size, the audit firm and CG (the independence of the Board of Directors) are statistically and positively associated with the level of mandatory FI disclosure provided by the sample firms. Firm size is a proxy for contracting costs and political costs; therefore, it might be suggested that Jordanian listed firms disclose FI-related information in order to reduce these expenses. The audit firm variable may be seen as a proxy for high contracting costs. Hence, firms which appoint Big-4 auditors are normally larger and with sizeable agency costs; therefore, they publish a greater level of FI information in order to dissipate any asymmetries may occur. Accordingly, this behaviour may be considered as a signal about the auditing firms used; Big-4 firms want to encourage their clients to provide high quality information in order to

enhance their own reputation in the audit market. This suggestion is consistent with prior studies. For instance, Hafiz (2003) documented that FI disclosure provided by Malaysian firms had positive relationships between the size and foreign activities of a company. Hassan et al. (2008) found that market regulations and auditing practices influenced the quality of FI disclosure of Malaysian companies. Specifically, they found that the level and quality of FI disclosure has increased year-by-year for companies that are audited by the Big-4. Moreover, the finding from regression analysis showed that there was a positive relationship between FI disclosure and the presence of an audit committee and the firm's industry. In this regard, Brit et al. (2013) argued that Australian extractives firms audited by a Big-4 auditor provide more extensive disclosure of FIs.

The results of the current paper have some implications for both international (IASB) and national (Jordan) regulatory bodies. For example, the results provide valuable insights for the IASB about the relevance of its accounting standards in general, and IFRS 7 in particular, to an emerging capital market such as Jordan. In addition, the study provides a great deal of insight for Jordanian policy-makers about how Jordanian listed companies react to new standards issued by the IASB. Finally, the results of the current study provide valuable visions for regulators about the implications of the CG on FI disclosure provided by Jordanian listed firms.

The current study is subject to a number of limitations. First, the current research employs a disclosure index where errors may have occurred although though that researchers were very careful through the scoring process. In addition, annual reports, although important, are not the only means by which companies disclose data about FIs. The current paper examined to what extent the sample firm of the paper use FIs in their business activities; future research may investigate Jordanian firms' usage of FIs. In spite of these limitations,

we believe that this research reveals a number of interesting findings about the association between FI disclosure and several firm characteristics of Jordanian companies showing the applicability of relevant theoretical frameworks in contexts not studied before and with important policy implications.

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Table 1: Measurement of Independent Variables

Variables	Proxies of Measurement
Company Size (LogSIZE)	Market capitalisation (LOG)
Audit firm (AuD)	Dummy: 1 of the Big-4 firms and 0 otherwise
Industry membership (IND)	Dummy: a value of 1 was given if the company was a financial firm, a value of 2 was used if the company was a service company and a value of 3 if the firm was in the manufacturing sector.
Ownership structure (OS)	Dummy: the percentage of ownership concentration was employed where a value of 1 was given if the company does have an ownership concentration of less than 20%, a value of 2 was used if the company had an ownership concentration between 20% and 50% and a value of 3 was given if the firm had an ownership concentration of over 50%.
Corporate Governance variables	
Independence of the Board of Director (CG_BoD)	The proportion of independent members (outsiders) of the Board of Directors; the number of independent members are divided by the total number of the Board of Directors.
Audit Committee (CG_AC)	Dummy: 1 if the company does have an audit committee and 0 if the company does not have such committee

Note: This table provides information about measures used to figure out independent variables examined in the current study.

Table 2: Descriptive Statistics about the Extent of FI Disclosure

Independent Variables Information				
Variables	Mean	St. D	Min	Max
Overall PFID	0.52	0.120	0.12	0.95
Accounting Policies	0.73	0.075	0.96	0.20
Balance Sheet	0.78	0.070	0.90	0.15
Income Statement	0.58	0.065	0.86	0.08
Hedge Disclosures	0.16	0.050	0.75	0.00
Fair Value Disclosures	0.83	0.102	0.98	0.25
Risk Disclosure	0.60	0.110	0.88	0.13
Other Disclosures	0.14	0.072	0.70	0.00

Notes: This table presents details about the proportion of FI information under IFRS 7 provided by Jordanian listed companies

Table 3 Independent Variables Information

Variables	Mean	St. D	Min	Max
SIZE	8.5	0.11	7.2	11.5
CG_BoD	0.40	0.15	0.10	0.50
AUD	26 Big-4 Accounting Firms		56 Non-Big-4 Accounting firms	
IND	38 financial firms		18 services firms	26 manufacturing firms
OS	60-Less than 30% Con		9- 30-50% Con	13-more than 50% Con
CG_AC	61 firms with AC		21 firms without AC	

Notes: This table presents statistical information about independent variables examined by the present paper. SIZE refers to firm size, AUD refers to the audit firm, IND refers to firm industry, CG_BoD refers to the independent members of the Board of Directors, CG_AC refers to the existence of the Audit Committee, and OS refers to the ownership structure.

Table 4: Correlations between the Variables

	PFID	PAD	BSD	ISD	HD	FVD	RD	OD	LogSize	AUD	IND	CG_Bo	CG_AC	OS
PFID	1.0	0.373*	0.337*	0.207	0.249*	0.301*	0.067	0.428*	0.425*	0.511*	0.324	0.479*	0.419*	0.380*
APD		1.0	0.671*	0.609*	0.705*	0.641*	0.466*	0.876*	0.410*	0.340*	0.314	0.578*	0.389*	0.398*
BSD			1.0	0.446*	0.500*	0.398*	0.294*	0.444*	0.374*	0.436*	0.268	0.610*	0.317*	0.238*
ISD				1.0	0.172*	0.474*	0.302*	0.478*	0.356*	0.513*	0.167	0.645*	0.414*	0.467*
HD					1.0	0.507*	0.183	0.504*	0.311*	0.610*	0.203	0.560*	0.402*	0.492*
FVD						1.0	0.309*	0.582*	0.382*	0.556*	0.271	0.682*	0.378*	0.310*
RD							1.0	0.319*	0.394*	0.345*	0.116	0.599*	0.418*	0.509*
OD								1.0	0.259*	0.291*	0.090	0.497*	0.333*	0.266*
LogSIZ									1.0	0.537*	0.339*	0.319*	0.601*	0.572*
AUD										1.0	0.234	0.256*	0.145	0.263*
IND											1.0	0.121	0.188	0.200
CG_Bo												1.0	0.324*	0.432*
CG_AC													1.0	0.396*
OS														1.0

Notes: This table represents the correlation test (Spearman) between dependent and independent variables. SIZE refers to firm size, AUD refers to the audit firm, IND refers to firm industry, CG_BoD refers to the independent members of the Board of Directors, CG_AC refers to the existence of the Audit Committee, and OS refers to the ownership structure. *: significance at 0.01, ** significant at 0.05.

Table 5: the Association between FI Disclosure and Firm Characteristics

Dependent Variables	Model 1
Intercept	14.243 (3.211)**
logSize	2.410 (3.613)**
AuD	4.219 (3.110)*
IND	-2.905 (-0.812)
CG_BoD	1.210 (1.980)*
CG_AC	0.782 (0.541)*
OS	1.156 (0.973)
Adjusted R^2	0.52
F-Statistic	6.538**

Notes: this table represent the regression analysis of the association between FI disclosure and firm characteristics. SIZE refers to firm size, AUD refers to the audit firm, IND refers to firm industry, BoD refers to the independent members of the Board of Directors, AC refers to the existence of the Audit Committee, and OS refers to the ownership structure. *: significance at 0.01, ** significant at 0.05.

Table 6: the Association between the Sub-categories of FI Disclosure and Firm Characteristics

Dependent variables	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	11.219 (4.220)*	9.766 (6.873)*	10.188 (5.012)*	12.011 (2.324)*	7.304 (1.528)*	13.549 (4.001)*	6.784 (3.458)*
LogSize	5.810 (2.435)**	3.550 (1.857)**	3.331 (2.984)**	2.072 (1.492)**	2.920 (0.984)**	3.328 (1.307)**	2.135 (1.431)**
AuD	1.770 (0.439)*	2.240 (1.458)**	2.113 (1.984)*	1.433 (0.924)	4.969 (2.482)**	5.908 (2.498)**	4.321 (1.578)**
IND	2.050 (0.224)	3.380 (2.100)	1.216 (0.714)	2.465 (0.123)	1.341 (1.198)	0.940 (0.333)	1.227 (1.004)
CG_BoD	3.490 (2.123)*	1.601 (1.090)**	3.012 (1.103)**	1.416 (0.991)*	1.577 (0.950)**	2.202 (0.833)**	2.453 (0.789)*
CG_AC	1.532 (0.883)*	1.496 (0.733)*	3.362 (1.911)*	1.381 (1.492)*	1.752 (0.449)**	1.275 (0.321)**	0.871 (0.235)
OS	1.450 (0.384)	1.879 (1.201)**	2.107 (1.003)*	1.714 (1.234)	2.885 (1.197)*	1.647 (392)**	1.075 (0.543)
Adjusted R^2	0.21	0.33	0.255	0.17	0.28	0.29	0.12
F-Statistic	9.213***	6.451***	8.177***	5.361***	5.711***	9.378***	6.612***

Notes: this table represents the regression analysis of the association between the sub-categories FI disclosure and firm characteristics. SIZE refers to firm size, AUD refers to the audit firm, IND refers to firm industry, BoD refers to the independent members of the Board of Directors, AC refers to the existence of the Audit Committee, and OS refers to the ownership structure. *: significance at 0.01, ** significant at 0.05.

Appendix 1: Financial Instrument Disclosure Indexes

Accounting Policies disclosures for each Class of Financial Instruments (FI)	
1	The nature of FI
2	Terms and conditions for FI designation
3	Recognition and measurement of FI
4	Terms and conditions of impairment
Balance Sheet Disclosure about FI	
5	FI at fair value (FV) through Profit or Loss (PandL) - held for trading
6	FI at FV through PandL – designated
7	Held-to-maturity investments
8	Available-for-sale financial assets
9	Loans and receivables
10	Financial liabilities measured at amortised cost
11	The carrying amounts of each class of FI
Income statement and equity disclosures for each class of FI	
12	Net gains/losses by classes of FI
13	Interest income
14	Interest expense
15	Fee income
16	interest income on impaired FI
17	Impairment losses
Hedging Accounting disclosure	
18	FI designated as hedging instruments
19	Nature of risks being hedged
20	Recognised Hedge ineffectiveness
Information of Fair Value Hedge (FVH)	
21	Description of FVH
22	Gains or losses of FVH
Information of Cash Flow Hedge (CFH)	
23	Description of CFH
24	Gains or losses of CFH
25	Period when CFH are expected to occur and affect PandL
26	forecast transaction for which hedge can be used
27	Amount that recognized/removed in/from equity during the period
Information of Hedges of Net Investments in Foreign Operations (HNFO)	
28	Description of HNFO
29	Gains or losses of HNFO
Fair value disclosure for FI by classes	
30	Measurement methods and assumptions
31	Information if FV cannot be measured
32	Fair values for each class of FI
33	Comparable carrying amounts
34	Changes in FV of FI
35	Amount recognised/removed in/from equity
Qualitative Risk disclosure	
36	Objectives, policies and processes for managing the risk
37	Exposure to risk and how the risk arise
38	Risk measurement methods
39	Changes in risks from previous period
Quantitative risk disclosures	
Credit Risk Disclosure	

40	Maximum exposure to credit risk
41	Concentration of credit risk
42	Credit quality of FI that are neither past due nor impaired
43	Collateral held as security and other credit enhancements
Market Risk Disclosure	
44	Maximum exposure to Market risk (interest rate, foreign exchange, others)
45	Concentration of Market risk
46	Maturity dates
47	Sensitivity analysis of each type of market risk
Liquidity Risk Disclosure	
48	Maximum exposure to liquidity risk
49	Maturity analysis
Other FI Disclosures	
50	Information on Reclassification
51	Information on Derecognition
52	FI pledged as Collateral
53	Allowances account for credit losses
54	Compound FI
55	Defaults and Breaches
56	FI that either past due or impaired