

# The relationship between accounting information and stock volatility

Faride Noori\*, Munes jalili and Hosna Shariati Nia

MSc student, Department of accounting, Islamic Azad University, Zahedan Branch, Zahedan, Iran

*Corresponding author:* Faride Noori

**ABSTRACT:** In recent years, accounting information system received a lot of attention, it facilities managers to take appropriate actions related to issues in organization, if AIS output is not accurate management will take wrong decisions, moreover, it considered competitive advantage for organization with well design accounting information system. Failure to implement well accounting information system will have adverse effects on organization success. Poor information quality may have adverse effects on decision making, for example indicate that error in inventory database may cause to take wrong decision by managers, resulting in over-stock or under-stock which had severe impact on company profitability and customer satisfaction. The volatility of stock prices in the stock market has been of concern to researchers. Stock return volatility which represents the variability of stock price changes could be perceived as a measure of risk faced by investors. The relationship between accounting information disclosure and stock volatility is stimulating considerable interest across an eclectic range of researchers and importantly capital market investors, forecast analyst and management.

**Keywords:** information quality, accounting information, stock volatility.

## INTRODUCTION

In recent years, accounting information system received a lot of attention, it facilities managers to take appropriate actions related to issues in organization, if AIS output is not accurate management will take wrong decisions, moreover, it considered competitive advantage for organization with well design accounting information system. Failure to implement well accounting information system will have adverse effects on organization success (Salehi and Abdipour, 2011). For years, financial accounting has been considered a formal and a widespread source of information within organizations (Chapellier, 1994). According to standards and accounting rules, financial accounting provides a representation of the financial situation of companies. This representation is communicated through financial statements at the end of each accounting period and in accordance with legal requirements and tax regulations. Thus, accounting information systems (AISs) have been limited to preparing financial statements for legal purposes and producing historical accounting and financial information (Mia, 1993).

### **Accounting Information System**

According to Grande, . (2011) AIS is defined as “tool which, when incorporated into the field of Information and Technology systems (IT), were designed to help in the management and control of topics related to firms’ economic-financial area”. The resulting statistical reports can be used internally by management or externally by other interested parties including investors, creditors and tax authorities. (Sajady . (2008) states that effective accounting information system will enhance financial statement quality.

### **Financial Accounting Standards Board (FASB) and the International Accounting Standards Committee (IASC)**

From the perspective of information economics, accounting and financial reporting play a vital role in an efficient capital market. Major accounting standard setting bodies such as the Financial Accounting Standards Board (FASB) and the International Accounting Standards Committee (IASC) have adopted this investor oriented information

usefulness perspective and specifically stated that the primary purpose of accounting is to meet the needs of capital markets (FASB, 1978; IASC, 1994). Consequently, it is not surprising that an important objective of the Chinese accounting reform is to improve the usefulness of financial reporting in the stock market (Winkle ., 1994; Xiang, 1998; Chen ., 1999). Since Ball and Brown (1968), accounting researchers have produced numerous studies documenting the association between accounting earnings and stock returns. More recently, studies about the value-relevance of accounting information have been expanded to include both balance sheet measures of assets and liabilities and income statement measures of earnings thanks to the Ohlson model (Ohlson, 1995). While earlier studies focused on the U.S. market, more recent research has investigated the value-relevance of accounting information in non-U.S. markets because of increasing emphasis on the role of accounting information in global markets (e.g., Alford ., 1993; Amir ., 1993; Harris ., 1994; Barth & Clinch, 1996; Chan & Seow, 1996; Graham & King, 1998).

### ***Accounting Information Quality***

Poor information quality may have adverse effects on decision making (Huang, Lee and Wang 1999), for example, (Bowen, 1993) indicate that error in inventory database may cause to take wrong decision by managers, resulting in over-stock or under-stock which had severe impact on company profitability and customer satisfaction. Quality of accounting information can be evaluated by four attribute Accuracy, timeliness, completeness and consistency (Xu, 2003), they examined critical success factors for accounting information quality, they identified and interviewed four groups namely (information producers, information custodians, information consumers and information managers), they suggest that organization issue, system and human issue is important to accounting information quality.

### ***The accounting information used for management purposes***

The accounting information used for management purposes is largely based on financial accounting. Firstly, most firms avoid keeping separate accounts for managerial and financial accounting due to the costs involved. For example only 5% of German companies deviate from the rules for accounting of internally generated intangible assets for purposes of managerial accounting (Rütte & Hoenes, 1995). Accordingly, a major argument in favour of the voluntary adoption of international accounting standards from the perspective of the preparers of accounting information has been its usefulness for managerial purposes (Wagenhofer, 2008). Secondly, even more importantly, external investors use accounting information to assess management's performance. Decisions by shareholders in the general assembly about exonerating management of their responsibilities for the past financial year are based on financial reporting. A manager's success and reputation are largely based on the firm's performance as measured by financial reporting. Considering externally reported performance measures for internal purposes is finally the consequence of a rigorous shareholder value focus (Coenenberg, 1995; Haller, 1997; Wagenhofer, 2006; Hemmer & Labro, 2008). In addition, managers' variable remuneration is often based on performance as measured by financial accounting. Since managers anticipate the way they are evaluated, their decision making is oriented towards achieving optimal performance as measured by the figures for which they are held accountable, as suggested by the famous line "What you measure is what you get! Hence, any accounting information used to assess and control management has an incentive effect and will be considered by management in its internal decision-making. Therefore, using accounting information to assess management's stewardship will have an impact on management's decisions.

### ***Accounting Institute of Certified Public Accountants (AICPA)***

According to the Accounting Institute of Certified Public Accountants (AICPA. 2005), financial statements must properly reflect the organization's financial and economic reality, so that the users are not induced to take decisions on misleading information. Financial accounting information also enhances the information environment of the reporting entity and those associated with it. The quality of financial disclosure can impact firms' cash flows directly, in addition to influencing the cost of capital at which the cash flows are discounted. Accounting information, such as that conveyed in publicly disclosed accounting reports, is also critical to the analysis of temporal liquidity positions of equity markets. Disclosure of accounting information arguably reduces information asymmetries amongst investors (Amihud and Mendelson, 1986). As argued by Black (2000) and Ball (2001), timely financial accounting disclosure system that is a prerequisite to the very existence of efficient stock markets in which stock prices to a considerable extent reflects all public information and incorporates private information as well as communicate the information set to managers, current and potential investors. However, there are several disclosing methods available. The choice of the most adequate method depends on the nature and relative importance of the information to be disclosed. Otavio and Luis (2009) notes that the most common methods are the following: Formal financial statements, information between parentheses, explanatory notes, supplementary statements and exhibits, audit report, annual

administration report and management discussion and analysis reports. The disclosure level partially depends on the sophistication level of the reader that uses it, as well as on the disclosure standard considered more desirable. However, Ang and Chen (2006) argued that firms endogenously choose the level of disclosure based on the costs and benefits of direct communications with the market. Otavio and Luis (2009) notes that disclosure standard can be divided into three levels; firstly, there is adequate disclosure which assumes a minimum information volume of disclosure compatible with the purpose of avoiding misleading financial statements. The information must be adequate to the user understanding, and to the actual situation of the firm at the time they refer to. Secondly, there is fair disclosure which holds the view that financial statements must report the firms' situation in a fair manner. Finally, there is full disclosure which considers the presentation of all relevant information. In this case, the financial statements must contain all the information which if omitted or ill disclosed might lead to serious errors concerning the firm's assessment and its trends. Otavio and Luis (2009) however, comment that the difference between the three levels of disclosure above is very subtle.

### ***Impact of ERP system quality on the accounting practices used***

The evolutions experienced in information systems have caused them to play a facilitating role in the introduction of accounting techniques (Rom, 2008). Indeed, Granlund (2001) identified that the establishment of an advanced information technology would introduce a change in management accounting practices. In the particular case of ERP systems, the latter is considered an important source of new accounting practices (Booth, 2000). In his study, Rom (2008) proposed to focus on the technical aspects of ERPs and examine their impact on management accounting practices. In fact, Rom (2008) defined the technical support of an ERP system as the ability of all its technical characteristics to design and consequently to use management accounting practices.

### ***Stock Returns Volatility***

The volatility of stock prices in the stock market has been of concern to researchers. Stock return volatility which represents the variability of stock price changes could be perceived as a measure of risk faced by investors. Shiller (1981) argues that stock prices are more volatile than what is justified by time variation in dividends. Similarly, Schwert (1981) concludes that stock market volatility cannot be fully explained by changes in economic fundamentals. Numerous studies have documented evidence showing that stock returns exhibit phenomenon of volatility clustering, leptokurtosis and Asymmetry. Volatility clustering occurs when large stock price changes are followed by large price changes, of both signs, and small price changes are followed by periods of small price changes (Mandelbrot 1963; Fama, 1965; Black, 1976). Ajao (2012) notes that a number of recent studies have sought to characterize the nature of financial market return process, which has always been described as a combination of drift and volatility. Volatility may impair the smooth functioning of the financial system and adversely affect economic performance (Rajni and Mahendra, 2007; Mollah, 2009). Stock price volatility is an indicator that is most often used to find changes in trends in the market place. Rajni and Mahendra, (2007) notes that stock price volatility tends to rise when new information is released into the market, however the extent to which it rises is determined by the relevance of that new information as well as the degree in which the news surprise investors. However, economists and financial experts have propounded theories on what causes volatility. Some financial economists see the causes of volatility embedded in the arrival of new, unanticipated information that alter expected returns on a stock (Engle, 1982). Others claim that volatility is caused mainly by changes in trading volume, practices or patterns which in turn are driven by factors such as modifications in macroeconomic policies, shift in investors' tolerance of risk and increase uncertainty (Rajni and Mahendra, 2007). These characteristics are perceived as indicating a rise in financial risk, which can adversely affect investors' assets and wealth. For instance, volatility clustering makes investors more averse to holding stocks due to uncertainty. Firm-level stock return volatility is important for both managers and shareholders. First, high volatility increase a firm's perceived riskiness, thereby raising its cost of capital (Froot, Perold and Stein 1992). Second, high volatility could affect the various agency relationships in the firm, exacerbating conflicts between stockholders and bondholders and hindering resolution of stockholder-management problems (Bainian and Verrecchia 1995). Third, recent research suggests that investment strategy based on volatility can earn statistically and economic significant abnormal returns (Fleming, Kirby and Ostdiek 2001, 2003; Ang, Hodrick, Xing and Zhang 2006).

### ***Factors that may lead to extraordinary returns reduction and unusual benefit are as below***

Increasing the transparency and quality of reported financial information by companies reduce the information asymmetry and having potential information and reduce obtaining stock unusual returns (Haqiqat, 2011). Unusual returns that are made by risk are durable, but unusual returns that are result of investor's wrong pricing don't have stability (Mashayekh, 2010). (Porter, 2004) states that: Competition in industry leads that industry's unusual income towards zero, this means that much less competition in industry, the less the degree of unusual income persistence

will be in industry. So the interest rates higher than the base interest rate (in competition condition) irritates entering new capital into industry. If most investors are aware of companies' financial information effect on unusual income, unusual return of market capital will be reduced somewhat and therefore market efficiency will be increased. (Kusha, 2010). Increasing accruals included in current incomes, unusual future incomes will be increased. And increasing cash flows included in current incomes, unusual future incomes will be reduced (Abbas Zadeh, 2011). Hemmati (2011) showed in his study that increasing company's intellectual capital will reduce its unusual return. a number of investors have calculated the expected rate of return using a number of financial ratios, that due to lack of knowledge of investors, this information is not reflected in actual price of stock and causes excess returns for investors who are aware of this relationship. Therefore, if most investors are aware of this relationship, unusual returns in stock market will be reduced and therefore market efficiency will be increased (Falah Shams and Kusha ,2010).

### ***Contingent variables***

Choe (1998) argued that the design of an accounting information system can be influenced by contingent variables. These variables are classified into two groups: organizational variables and individual variables. The organizational variables are related to the organizational structure (Chenhall and Morris, 1986; Gerdin, 2005), the task uncertainty (Chong, 1996), the organizational strategy (Naranjo-Gil, 2004) and the budgetary participation (Tsui, 2001). The individual variables refer to the factors related to some individual characteristics that may have effects on accounting information systems. The literature review identified the studies by Chapellier (1994), Lavigne (2002) and Ngongang (2007), who selected factors relating to the training, level of education, experience and age of the leader. These factors have significant effects on accounting information systems.

### ***Impact of information quality on the accounting practices used***

Kanellou and Spathis (2011) confirmed that there is a reduction in the time and frequency of preparation of financial statements (monthly, quarterly and annual financial statements) after the adoption of an ERP. Similarly, Salehi . (2010) confirmed in their study that a sophisticated AIS improves accounting performance. This performance is reflected in the adoption of new accounting techniques. Rom (2008) concluded, then, that ERP systems are considered an important source of information for most accounting practices. Al-Eqab and Ismail (2011) demonstrated that extended, timely, frequent, aggregated and integrated accounting information should be particularly useful for managers to enable them to respond quickly to changing environmental and market demands. Based on this information, officers will request the use of more advanced accounting practices. In this sense, Galani . (2010) showed that the more the information that results from an ERP system is of greater quality, the more it provides support for leaders to establish strategic and operational budgets.

### ***The relationship between accounting information disclosure and stock volatility***

The relationship between accounting information disclosure and stock volatility is stimulating considerable interest across an eclectic range of researchers and importantly capital market investors, forecast analyst and management. Volatility is simply defined as a measure of dispersion around the mean or average return of a security. It is a measure of the range of an asset price about its mean level over a fixed amount of time (Abken and Nandi, 1996). It follows that volatility is associated with the variance of an asset price. If a stock is labeled as volatile, then it is plausible that there will be a systematic variance of its mean over time. Conversely, a less volatile stock will have a price that will deviate relatively little over time. There are several reasons why an increase in disclosure of accounting information should reduce stock volatility. First, is the effect on stock volatility arising from the role of accounting information disclosure in mitigating uncertainty. Accounting disclosures may reduce the magnitude of the impact of news about a firm's performance, which would reduce stock price volatility (Lang and Lundholm 1993; Bushee and Noe 2000). Second, retrospectively, the market microstructure theory also suggest that by increasing the amount of public information, disclosure is likely to reduce information asymmetries in the market that result in pronounced price changes in response to changes in demand for the stock (Diamond and Verrecchia 1991). Finally, disclosure may reduce heterogeneity of beliefs about the true value of the firm. It may thus reduce both the volume traded and the volatility of the stock price. Conversely, one can also think of a number of reasons why an increase in disclosure might increase stock volatility. First, an increase in disclosure implies that more information is released, which in and of itself might move the price and increase volatility (Ross 1989). Second, an increase in the disclosure of information relies on sophisticated investors to interpret and put the disclosed information into context. Indeed specific disclosure requirements could provide the markets with more data that might be misconstrued by analysts. More disclosure might thus inject more market volatility (Institute of International Finance 2003, 1987; Shleifer and Vishny 1997). Consequently, a plausible theoretical link can be established between accounting information and stock return volatility. Fundamentally, the theory of market efficiency suggests that the conditional variance of

accounting information is part of the conditional variance of stock returns. Thus if current accounting information is more uncertain, thereby increasing the uncertainty of firm's future cash flows, future stock returns are expected to be more volatile (Lin 2000; Krische and Lee 2000).

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