Impact of liquidity and financial leverage on firm's profitability – an empirical analysis of the textile industry of Pakistan

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Abstract

Purpose – This study aims to determine the impact of liquidity and financial leverage on the profitability, using a sample of 40 selected publicly quoted companies in the textile sector of the Pakistani economy.

Design/methodology/approach – Through quantitative approach, pooled panel regression and descriptive statistics models are used by taking annual data of Pakistan's textile sectors from 2006 to 2016. Secondary data has been gathered from financial statements of the firms.

Findings – The results revealed that there is a positive relationship between liquidity and profitability and negative relationship between financial leverage and profitability. The results for liquidity measure CR revealed positive strong impact on ROA and the financial leverage measure D_E ratio showed negative but not strong impact on ROA. The other part of result concluded that there is a positive strong impact of C_R on ROE too and D_E has a negative impact on ROE.

Research limitations/implications – The results are showing the impact among these ratios for the textile sector of Pakistan only.

Practical implications – This study can help higher management of textile firms firm in decision-making stating clearly about how to perform well to enhance financial health of company, which can encourage investors to invest in companies having sound market standing.

Originality/value – This study takes the latest empirical data with different analysis technique.

Keywords Profitability, Liquidity, Textile, Financial leverage

Paper type Research paper

1. Introduction

1.1 Preamble

Social welfare is mainly reliant upon financial development and the corresponding benefits of the business world (Makori and Jagongo, 2013). As a consequence, the firm assumes a considerable role in the country's financial health and the work of a nation (Malik and Ahmed, 2013).

The economy of Pakistan is represented by approximately 12 areas of activity, including the production of raw materials, food, chemicals, various manufactured items and pharmaceuticals. In the private sector, the production of raw materials accounts for up to 38.8 per cent of the activities of textile firms. This is significant to the economy of the country (Akter and Mahmud, 2014), and it contributes to the GDP, foreign trade profit and employment of the population (Borhan *et al.*, 2014). Research in the area of the major factors contributing to the profitability of the textile industry showed that raw materials provide a 52 per cent share (Nishanthini and Nimalathasan, 2013).

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In industrial clothing production, work is generally organized according to the operations required for a style or styles. The fabric is cut according to size, style, etc., and then the parts of the garment are tied into bundles in advance of assembly. The individual sewing tasks are organized systematically, and specialized sewing machines are used for individual tasks.

Traditionally, the textile and apparel industries have been located in the developed nations. In the European Union, the sector is dominated by small- and medium-sized enterprises and represented by clusters in various locales that are mainly dependent on this source of the financial enterprise (Commission of the European Communities, 2003). Materials and garments are among the segments where developing nations have the most to gain from multilateral exchange progression. The industries have the potential to yield a profit for numerous sectors of society, including merchants and laborers (Abor, 2005).

The aim of the research under discussion in this paper was to examine the performance of textile enterprises and identify the different determinants that influence their productivity. Financial performance may be seen as one of the determining factors in this respect (Karaduman *et al.*, 2010). The clothing industry is labor intensive, and it offers entry-level occupations for unskilled workers in both developed and developing nations. Employment creation in the division has been especially crucial for women in developing countries, who until recently had no work opportunities other than those offered by family members or, alternatively, they sought positions in the casual sector. The clothing industry is also one which, in general, and given present-day levels of innovation, can be established even in emerging nations at moderately low investment costs. As a consequence, it is seen as the first step on the ladder to industrialization in developing countries, some of which have encountered a high yield development rate in the sector (e.g. Bangladesh, Sri Lanka, Vietnam and Mauritius). The clothing industry is both a work-intensive, low-wage industry and a dynamic, creative segment. In advertising, the industry is described in terms of innovation, moderately paid laborers and a high level of adaptability. Using data from financial statements and conducting financial ratio analysis, businesses find their strengths and weaknesses and work on decision-making and operations accordingly (Makori and Jagongo, 2013). The upper hand and competitive advantage of firms in this market are identified as those with the capacity to deliver designs that match consumer tastes and inclinations and have an impact on the same, notwithstanding cost effectiveness. The decision-makers of firms in this market sector are generally situated in developed nations and frequently in constrained geological regions or groups in the same. The essentials of relevance to the generation of innovation in the textile business have not changed significantly since the previous century and may be described by the dynamic package framework.

This study used financial ratio analysis to find out the key areas to improve the profitability of the textile industry of Pakistan. Liquidity is related to assets management, and financial leverage is related to capital structure management. Hence both are very important for increasing the profitability of a company.

1.2 Research problem

There are various factors that can impact the profitability of the business, among which liquidity and leverage are ones (Karaduman *et al.*, 2010) that can affect the profitability of some specific industries or sectors, but the impact may differ according to the nature of the business and industry. The study under discussion specifically focused on the textile industry of Pakistan, and both variables (liquidity and leverage) were selected for the purpose of assessing their impact on profitability. Various models and approaches have been used for

profitability management, and these may also help in determining the effect of these both factors on profitability (Ahmad *et al.*, 2018). This study aimed to assess the effect of liquidity and financial leverage on profitability, using a sample of selected, publicly quoted companies in the textile sector of the Pakistani economy.

1.3 Objectives of the study

- to find out the impact of liquidity on profitability, i.e. returns on equity (ROE) and return on asset (ROA) of Pakistan's textile industry; and
- to measure the impact of the financial leverage ratio on profitability, i.e., returns on assets (ROE) and (ROA) of Pakistan's textile industry.

2. Literature review

Profit making is the driving force of every business, and both business leaders and managers work to increase profitability (Rafique, 2011). Growth, productivity, capital, operating expenses and credit risk are the primary determinants of profitability (Malik, 2011). Efficient working capital management leads to higher profitability, for example, a study on profitability and liquidity recommended that liquidity management directly impacts upon the risk and profitability of a business (Raheman *et al.*, 2010). Effectively it may be said that better working capital management enhances the financial power of a company. On the other hand, the financial leverage of the firm is the primary determinant of its capital danger, as preferred stocks have priority over common share, in the case of capital bankruptcy (Asif *et al.*, 2011).The more the loan or debt in the firm's capital structure, the more the danger of default and the less the worth of its capital (Jarrow, 2013). Many researchers have studied the importance of equity sequence and role, and how the firm is financed is of central concern (Khan *et al.*, 2013). If an inappropriate combination of the right side of the balance sheet is considered, it then becomes a challenge for the business. Several studies concluded that this results in a reduction in the firm's operations and capability of earning a profit (Asif *et al.*, 2011). Pakistan's textile sector is also challenged in the area of capital composition and, because of this noneffective selection of financing modes, the operations and performance of textile firms are negatively impacted.

2.1 Profitability of firms

The concept of profitability is to assess the ability of business for the generation of excess worth out of investment compared to costs incurred during a specific period (Shaheen, 2012). Multiple profit margins are used to calculate a company's earning at different cost and expense levels, inclusive of gross, pretax, operating and net profit (Saleem and Rehman, 2011). Profitability can be measured and observed in comparison to expenses, and assets indicate how good a business is in using the same to develop sales (Bhatti *et al.*, 2010). The relationship between proper utilization and number of assets is positively and directly proportional to the ability of firms to achieve potential profit maximization (Raheman *et al.*, 2010). As a company, by increasing assets, can create good profit with a correspondingly right margin, stock owners may achieve more profit growth when some additional asset is the outcome of the external loan (Asif *et al.*, 2011). Profitability ratios are one of the primary instruments used for calculating profitability from the data of financial statements. They indicate the overall effectiveness of a business, also profitability from the perspective of equity holders, then security among updated assets that contribute to the yield represent gain. Ratios related to the measurement of profitability are calculated on a dualistic basis for

the most critical segments; one is with relation to sales and the others may be viewed in the investment context (Saleem and Rehman, 2011). The most commonly used calculations and ratios of profitability are net operating margin (NOM), gross profit margins (GPM), return on capital employed (ROCE), assets (ROA) and equity (ROE). Some researchers have viewed ROA as the net return generated by a company, comparatively of all total resources (Bhatti *et al.*, 2010). Usually, the profitability ratios demonstrate the overall result of management of the asset, liquidity to debt and the goodwill of the business. The shared samples of profit proportions comprise ROAs, capital employed, equity, sales and investment as well as net and gross profit margin (Nissim and Penman, 2003).

2.2 Liquidity of firms

The liquidity of firms refers to the amount of cash or other liquid assets that the firm has at its disposal. A number of ratios for the measurement of liquidity are available, and they demonstrate a business' ability to make payments (Muhammad *et al.*, 2012). In the case where payments are delayed, the company will clearly face problems in fulfilling its current and necessary financial obligations (Evans and Jovanovic, 1989). The net result is an impact on the firm's operations and earnings. Liquidity ratios are analyzed and used for liquidity management in every firm that relies on profitability (Jarrow, 2013). Corporation has sufficient liquid assets (cash and bank) to cover the payment obligations. The required liquidity for each firm is associated with its nature of business as well as the financial position showed by the balance sheet (Obradovich and Gill, 2012). For the evaluation of a liquidity position, it is essential to assess firms' assets and debts.

2.3 The relationship between liquidity and profitability

Researchers have, in the past, examined the relationship between these two variables using ratio analysis. The profitability ratio, such as ROA, places emphasis on ratios of liquidity but ROE does not (Bhunia, 2013). Both ROA and ROE are ratios of profitability. Those companies with lower current assets have constant problems in their business if the liquid assets and returns are not in a good position (Home and Wachowiz, 2000). The cash conversion cycle also shows the relationship between these two variables, and by the use of the current ratio, the importance of the measurement of profitability will be high (Shaheen, 2012). The management of liquidity is more critical during crises (Lartey *et al.*, 2013). Efficient liquidity management is very crucial for the firm's well-being, as it helps the firm to continue its operations (Lesáková, 2007). Of all the issues in which working capital management features, the tradeoff in the profitability of current assets is the main one (Lartey *et al.*, 2013).

Despite the many favorable findings on the link between liquidity and profitability, there are a few studies that claim no significant relationship between them (Nissim and Penman, 2003). The liquid assets are usually less profitable than fixed assets. Investment care focus on the working capital and liquidity management, do not appear to result in higher production and sales (Bhunia, 2013). The relationship between liquidity and profitability may become positive if the long- and medium-term periods are taken into account, based on the concept that a low amount of liquidity asset in the business may cause in a decrease in its earning power because of the higher need for loans, and obviously low profitability may not generate enough cash (Khan *et al.*, 2013).

2.4 Financial leverage of firms

This concept, used in the context of commerce, alludes to an obligation or to the obtaining of assets to back the purchase of stock, hardware and other organizational resources. In a

business context, the leverage term is perceived as a loan, or it is a reference to borrowing (or getting in debt) to finance several purchases (Gill and Mathur, 2011). If a company is incurring a lot of debts, or in other words, leverage, it seems to increase its chances of bankruptcy (Asif *et al.*, 2011). Financial leverage has some positive aspects as well, such as, it increases the returns as the right side of balance sheet gets enhanced; and it generates more profit, especially return on equity (Jarrow, 2013). If external financing (debt) is used rather than internal financing (equity) then the capital of the firm is not deducted by the issuance of more ownership claim securities. Taking debt is a positive thing for the businesses seeking growth and investors are aware of this, but when financial leverage comes to a critical point, investors become concerned about the financial position of the company (Bhatti *et al.*, 2010). Financial leverage is at the right-hand side of the balance sheet. A study conducted in the USA supported the use of financial leverage, on the grounds that a firm's operations can increase the firm's earnings per share, as the company that does not use equity to issue shares is not diluting the owner's earnings (Ali, 2011). However, it cannot be denied that too much financial leverage can cause default risk. The most appropriate and commonly used ratio for the analysis of financial leverage is the debt/equity ratio. This ratio indicates the portion of loan financing for the equity capital of the business (Nissim and Penman, 2003).

2.5 The relationship between financial leverage and profitability

Many research papers have been published on the subject of earning power and financial leverage. Some of the research findings concluded that there was a positive relationship, whereas others found it negative. In light of the significance of profitability to the company's growth and long-run development, theoretical and empirical information has been used to analyze the issue (El-Sayed Ebaid, 2009). Companies with good profit react by leveraging up, as a result of the positive relationship between the variables (Lartey *et al.*, 2013). The growth and earnings from leverage are significant, and the utilization of loans positively affects the market value of the firm (Asif *et al.*, 2011). It would appear that the company's return on equity financial leverage has a good influence, as the cost of capital in the form of interest is higher than the power of an asset to generate profit (Akinlo and Asaolu, 2012). There is a positive relationship between the financial leverage and earning the power of the firms, and when a firm becomes deeper in debt and external finance increases then the shareholders' wealth is maximized (Memon *et al.*, 2012). When shareholders have control over the operations of a business then debt level and leverage become positively related, and the reverse is also true (Kraus and Litzenberger, 1973). A number of authors have reported that, between leverage and profitability, the correlation is negative as well, and their findings show that firms with high profitability have lower leverage when compared to less profitable businesses, because they use their retained earnings rather than applying for loans, etc. (Enqvist *et al.*, 2014). Stock prices reflect the performance of firms. One study reported that there is a reverse relationship between debt-to-asset ratio and between a firm's leverage trend and its previous profitability (Ayub, 2015). Although some studies suggested that there is no correlation between the variables, one (Kraus and Litzenberger, 1973) found that, between financing structure (capital structure) and profitability, there is no relationship and long-time debt is not statistically significant.

2.6 In the context of other sectors

A number of researchers have examined the relationship between the variable relations and resultant impact in many sectors other than textiles, and the results varied. For example, an economic system with no business context, taxes or structure of financing had no

relationship with the value of the firm (Rafique, 2011). A study of the cement sector suggested that, given various assumptions, the market value of the leveraged and unleveraged firm would not be different (Jarrow, 2013). Another found that if the total debt was used by automobile companies for financing its operations then the profit and market value of the firm would be optimal after including taxes in the model (Saleem and Rehman, 2011). In the service sector, there have been many research projects conducted to determine bank profitability, and most concluded that liquidity was of prime importance (Enqvist *et al.*, 2014). There have also been multiple reports on the relationship between bank liquidity and profitability. Some claimed that banks which hold more liquid assets were decreasing their costs and increasing profitability (Lartey *et al.*, 2013). In effect, the fewer the funds that are engaged in the liquidity segment, the higher the profitability will be (Nawaz *et al.*, 2011). The findings of the researchers in the field have varied from context to context when examining the banking sector's liquidity and profitability relationship. Research in the manufacturing sector indicated that the profitability and liquidity are measured to an extra level, and as a consequence, excessive or insufficient liquidity may both represent challenges to the manufacturing enterprise (Bhunia, 2013).

2.7 In the context of Pakistan's textile industry

If the debt part in the capital structure of the firm exceeds and the cost of an agency, then a negative impact will result from this increase in the leverage and, ultimately, lead to a rise in the costs of the agent (Schumpeter, 2010). Three causes appear to point to this adverse impact. The first is the insolvency cost (Azmi, 2014). Second, administrators may not be in a position to control hazards, leading to an increase in the expenses incurred, insolvency or liquidation (Patti, 2005). The third is the wasteful utilization of money for domain building, which increases organization costs. Researchers in this area (Zeitun and Tian, 2007) found that an association's capital structure had a negative connection with the firm's execution. The effect of six illustrative factors, i.e. use, estimate, development, strong quality, assessment and hazard has been analyzed on the association's execution measure ROA in the textile segment of Pakistan. The indications of coefficients in the relapse display demonstrate that use, size and substantial quality are contrarily identified with the arrival of resources and hazard, assessment and development being identified with return on funds (Memon *et al.*, 2012).

Specifically, on the concept and variables of capital structure and liquidity management, minimal research has been carried out in the context of Pakistan. Booth *et al.* (2001) picked ten developing countries, which included Pakistan for their research. However, their work was limited to those companies that were included in the KSE 100 index. Another study (Memon *et al.*, 2012) considered all of the non-financial firms involved in the KSE, but the data used were limited to the period from 1997 to 2001. Subsequent research included the utilization of the model panel regression while other effects were fixed. In the textile sector of Pakistan, the limited research findings Ayub (2015) and Khan *et al.* (2013) tested the impact of different variables on the profitability of this different industry. Hence, the research under discussion in this paper aimed to close the knowledge gap by assessing how specifically liquidity and financial leverage impacted on profitability, using recent data of the Pakistan textile industry.

Textile sector of Pakistan is provided a higher level of the subsidiary by State Bank of Pakistan because it helps to encourage exports of yarn, towels, yarn and synthetic textiles, etc., according to State Bank's figures dated May, 10, 2007, exports of textile has grown up by 10.3 per cent. This sector contributes to industrial output, employment generation and exports. Its economic significance is further supported by the contribution this sector makes

to the manufacturing investment and pays a sustainable portion of taxes in the form of indirect taxes.

Industrial development will have a significant impact to support economic growth, improving national stability, creating job and business opportunities and technological advancement (Ningrum, 2008). Manufacturers of textile, fabric and clothing contribute to economic growth, potentially helps to reduce unemployment. Creation of new business units tends to create job opportunities in the manufacturing industry (Nurlina and Muda, 2017).

Khan *et al.*(2013) highlighted that debt-to-equity ratio, return-on-equity ratio, cash flow ratio, earnings per share and time interest earned ratio effects of returns of textile firms of Pakistan. The yields are positively affected by equity and earnings per share, and this effect is because of investment in domestic industry. It is suggested that the government should give certain incentives to these domestic investors to encourage them to invest in the home country. The profit generation by a local investor would directly or indirectly affect the capital market of the country. In the short run and long run, the improved financial system helps in improving the comparative advantage of the country, greater excess to external finance leads to improvement of the country's textile sector competitiveness. A state would have comparative advantages in the production of proposed goods requiring more external financial.

Capital structure refers to the financing of assets sides (right-hand side) of the balance sheet by any firm. Most of the times, firms manage both sides (level of debt and equity) to maximize the overall performance (Hussain, 2011).

Berger and Bonaccorsi di Patti(2006) specifies that efficient firms are more likely to earn a higher return for a given amount of capital and higher yield can be used as a safeguard against the risk associated with the portfolio of that firm. Therefore, efficient firms are in a better position to deal with debt obligation and replace their equity against the debt in their capital structure. Firms' value is determined by how it structures its capital to create the value of its assets and identify its earning (Modigliani and Miller, 1958).

2.8 Importance of both in the supply chain of the textile firm

Assets accessible to a firm or business to meet its everyday activities are referred to as working capital, necessary in the entire supply chain of the textile industry, but most crucially in dealing with different steps of textile manufacturing and providing the necessary raw materials. Financial leverage is crucial while dealing with suppliers, as taking loans from suppliers may lead to various problems for a garment firm.

Liquidity administration is one of the essential matters considered by each association, and carelessness may prompt money-related emergencies in the firm. In the literature, researchers reported that careless administration of working capital effectively caused problems in garment enterprises (Talha *et al.*, 2010). For the most part, working capital administration is vital to guarantee that the organization can meet the transient obligations and working expenses. In a garment firm, current resources and current liabilities involve keeping a record of sale, stock, attractive securities, prepaid cost, momentary obligations, creditor liability, collected liabilities and other fluid resources and obligations. One study reported in the literature clarified the fact that working resources and liabilities of an organization linked to working capital of textile firms are considered as principle sources, while deficiency of money and credit in any business will represent a danger for the survival of the same (Binti Mohamad and Mohd Saad, 2010). Inevitably, working capital administration requires momentary resources and liabilities related choice.

Insufficient administration of liquidity and leverage in a textile firm have been investigated by Sharma (2014), who demonstrated, with reference to 2,600 of the best Asian organizations, a decrease in the execution of working capital administration. This was

because of the impact of both oil and gas businesses and metal and mining enterprises, the aggregate deals of which have a critical offer. There are two points of view to comprehend a working capital approach, one being the venture viewpoint and the other financing discerning. Sharma's (2009) venture viewpoint included choices taken by the board based by and large on speculation about the (then) current resources of the textile industry.

Financing of current resources is an obligation of any organization. Explanations have been given by various researchers to assist in the comprehension of the two points of view of the liquidity management strategy. "Forceful speculation arrangement (AIP) is related to high hazard since holding a lower dimension of current resources will result in wasteful liquidity" (Nazir and Afza, 2015). Sharma (2009) clarified AFP manages momentary liabilities held by the firm, extenuating factors being low in conditions and a lower rate of enthusiasm when contrasted with long haul obligation.

3. Research methodology

3.1 Research design

The research under discussion involved a quantitative approach and explanatory strategy to find out the impact of liquidity and leverage on the profitability of Pakistan's textile industry. Secondary data from Thomson Reuters was used. The quantitative part is carried out through objective and numerical approach, gathering numerical data and financial ratios. Linear regression and panel least squares estimation method was used to analyze data of 32 textile firms over a period from 2006 to 2016 (11 years).

3.2 Variables description

- One of the independent variables is financial leverage; the ratios of financial leverage and debt to equity ratio were selected to test the impact.
- The dependent variable in this research was "profitability." For the measurement of profitability, ROE and ROA ratios were used. This provided information about firm performance, and how well a firm uses its equity and assets to generate profits.
- Liquidity was used as an independent variable which was measured as the current ratio.
- Firm size was used as a control variable which was measured as total assets.

3.3 Hypothesis

H1. Liquidity variable current ratio has a significant positive impact on profitability ROA and ROE.

H2. Leverage variable debt ratio has a significant negative impact on profitability ROE and ROA.

H3. Liquidity ratio has comparatively more impact on profitability.

3.4 Data collection and sampling method

In the study, the entire population (Pakistan textile industry) was sampled initially for the period from 2006 to 2016 and then firms with incomplete or unavailable data were excluded. The quantitative sample comprised 40 textile firms in Pakistan's textile industry. A

probability sampling method was used. The textile industry was selected because it is the largest industry in Pakistan and makes a substantial contribution to the economy. The secondary sources were Thomson Reuters DataStream.

3.5 Plan of analysis

EViews software was used, and panel regression tools of analysis and descriptive statistical analysis was applied. The analysis was divided into two broad categories, these being descriptive and quantitative:

(1) *Descriptive analysis:* This was the initial phase in the examination of data; it enabled the researchers to portray relevant parts and derive data about each significant variable.

(2) *Quantitative analysis:* In the quantitative examination, panel regression examination was used to appraise the causal connections between profitability variable, liquidity and other selected factors. Panel least squares were selected for investigation since Deaton (2012) utilized this technique in his examination to good effect. For this reason, for investigation, the EViews software was used to process financial information.

3.6 Data analysis model

Panel regression analysis was used to ascertain the proposed relationships as hypothesized above. The other name of panel regression is the constant coefficients model. Using this method, both slopes and intercepts are constant, in which the time series data, as well as the cross-sectional firm data are paneled together by supposing that no temporal and significant cross section is there.

3.7 Conceptual framework

This section discusses the results and findings of the study for panel data of Pakistan's textile sector from the period of 2006-2016, by using the panel regression method (Figure 1).

4. Results and empirical analysis

This section discusses the results and findings of the study for panel data of Pakistan's textile sector from the period of 2006- 2016, by using the panel regression method.

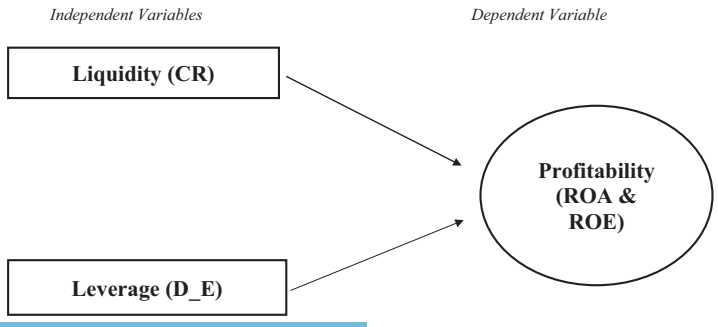

Figure 1.

As for independent variables, the results showed a mean value of 1.174064 of current ratio with a maximum value of 5.51731 and a minimum value of 0.147600. Firms had an average of 332.9074 debt-to-equity ratio with the volatility of 1631.652 debt on equity.

The following results of regression analysis were obtained using the panel least squares method with cross-section fixed effects for both ROA and ROE models. The effects choice was justified by the Hausman test, and the results are presented in Tables II and III.

The results show, as seen in Table V, that debt-to-equity ratio (D_E_RATIO) variables is significant with coefficients of −0.02 (−10.08). The D_E has a negative impact. The current ratio (CR) variable and total assets (TA) variables are both insignificant with *t-values* 1.45 and −0.57 and *p*-values being less than 0.05. The model is significant with an R-square value of 0.4661, which suggests substantial explanatory power.

5. Discussion

The overall results revealed that well-designed liquidity management policy could lead to an increase in the profitability of firms in the textile industry. The results for liquidity measure CR revealed the positive, substantial impact on ROA and the financial leverage measure D_E ratio showed an insignificant impact on ROA. The other part of the result concluded that there is a positive and substantial negative impact of D_E_RATIO on ROE. The relationship among these ratios is for the textile sector of Pakistan only.

Variables	Minimum	Maximum	Mean	SD
CR	0.147600	5.517371	1.174064	0.666214
D_E	−5037.000	18786.06	332.9074	1631.602
ROA	−18.86000	33.89000	6.770000	8.225431
ROE	−696.7700	149.1600	0.604845	64.04042

Notes: Table I shows descriptive statistics of the textile sector of Pakistan based on data collected from 2006 to 2016 with a total of 400 observations. The ROE represents mean value of 0.604845 and standard deviation of 64.04042 with a range of −696.7700 and 149.1600, respectively. Firms in this sector generated an average of 6.770000 returns on assets with 8.225431 of standard deviation with a minimum range of −18.86000 to the maximum of 33.89000

Table I.
Descriptive statistics of textile industry

Correlated random effects – Hausman test Equation: untitled Test summary		Chi sq. statistic	Chi sq. df	Prob.
Test cross-section random effects				
Cross-section random		27.332832	3	0.0000
Cross-section random effects test comparisons				
Variable	Fixed	Random	Var (diff.)	Prob.
CR	2.555163	3.619502	0.112336	0.0015
D_E_RATIO	0.000152	−0.000111	0.000000	0.0024
TA	−0.000000	0.000000	0.000000	0.0292

Notes: Table II shows Hausman test results for ROA model. The test obtained here hypothesizes that model should be fitted with cross-section random effects. This hypothesis is rejected with *p*-value less than 5%. Therefore, ROA model is fitted with fixed effects instead of random effects as shown in Table IV

Table II.
Hausman test for ROA model

Correlated random effects – Hausman test Equation: untitled Test summary		Chi sq. statistic	Chi sq. df	Prob.
Test cross-section random effects				
Cross-section random		38.146183	3	0.0000
**WARNING: estimated cross-section random effects variance is zero				
Cross-section random effects test comparisons				
Variable	Fixed	Random	Var (diff.)	Prob.
CR	6.006381	7.368775	6.493593	0.5929
D_E_RATIO	−0.017551	−0.021804	0.000000	0.0000
TA	−0.000000	0.000000	0.000000	0.3417

Notes: Table III shows the results of Hausman test obtained for ROE model, which suggest that random effects model is not supported statistically, as the test's hypothesis is rejected. Hence, the ROE model is estimated with fixed effects in Table V

Table III.
Hausman test for ROE model

Variables	Coefficient	Std. error	*t*-statistics	Probability
Dependent variable: ROA				
CR	2.555	0.707	3.614	0.000
D_E_RATIO	0.000	0.000	0.508	0.612
TA	0.000	0.000	−1.554	0.121
C	5.264	1.153	4.566	0.000
$R^2 = 0.377879$				

Note:

$$ROA = 5.264 + 2.555CR – 0.000D\_E\_RATIO + 0.000TA \quad (1)$$

t-values: (4.566) (3.614) (0.71399) (−1.554)

Table IV.
Regression results of liquidity and leverage with ROA

Variables	Coefficient	Std. error	*t*-statistics	Probability
Dependent variable: ROE				
CR	6.01	4.13	1.45	0.15
D_E_RATIO	−0.02	0.00	−10.08	0.00
TA	0.00	0.00	−0.57	0.57
C	5.39	6.73	0.80	0.42
$R^2 = 0.4661$				

Note:

$$ROE_{it} = 5.39 + 6.01CR – 0.02DE + 0.00TA \quad (2)$$

t-values: (0.80) (1.45) (−10.08) (−0.57)

Table V.
Regression results of liquidity and leverage with ROE

The finding that there is a positive relationship between liquidity and profitability is consistent with the results found by researchers (Saleem and Rehman, 2011) who examined data from 26 Pakistani oil and gas companies. Also, liquidity and size of the firm have positive relation profitability, whereas debt-to-equity ratio is negatively correlated with

profitability in textile firms in 2005, suggesting that the research under discussion confirmed the correlations.

The findings of this research concluded that there was a negative relationship between a firm's financial leverage and profitability and, although it is insignificant on ROA, this supports the findings of others who investigated the cases of insurance companies (Malik, 2011) and found that "there is a negative relationship between leverage and profitability for Pakistani insurance companies." The findings of some others were contradicted (Nawaz *et al.*, 2011).

6. Practical implications

As the textile industry of Pakistan is prominent, the findings reported in this paper have the potential to influence the new entry firms of the textile industry when considering both working capital and financial leverage management to get more profit.

The results may also help the higher management of the firm in decision-making, stating clearly how to perform well, to enhance the financial health of their companies and encourage investors to invest in companies having sound market standing. For every business, money circulation is necessary to achieve financial stability like as a result suggests a negative relationship between debt-to-equity ratio and profitability.

7. Conclusion and future recommendations

This research paper aimed to highlight the importance of liquidity management for the profitability in the specifically textile industry of Pakistan as well as the focus on the policies about the debt and leverage of the firm. All of the hypotheses of this research were accepted. It was concluded that there is a positive relationship between a firm's liquidity and profitability. Hence, a firm meeting its day-to-day cash operations appropriately can get high returns on assets and return on equity. Contrary to this, the firms with high debt and leverage are risk-prone and unable to generate high profit, so for this, a manager should focus on equity by not relying too much on debt financing. Financial managers of firms should focus on liquidity management policies and components if they want to achieve sustainable financial growth. This study can help the higher management of the firm in decision-making stating clearly about how to perform well to enhance the financial health of a company, which can encourage investors to invest in companies having sound market standing. For businesses, money circulation to achieve financial stability like as a result suggests a negative relationship between debt-to-equity ratio and profitability. It is essential for a firm to have efficient debt management to avoid risk or a decrease in profitability. As the result of this research shows that the impact of debt-to-equity ratio on ROA is insignificant, it is recommended that future research can identify the contributing factors and causes. This study is based on the textile sector, so it is also suggested that the same variables should be tested in other sectors.

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