Towards Understanding the Firm Specific Determinants of Corporate Financial Flexibility

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ABSTRACT

The study objects for determining the most important firm specific factors affecting the corporate financial flexibility of the listed manufacturing firms at Amman Stock Exchange. Firm specific factors including, profitability, assets tangibility, cash holdings, and retained earnings, are taken into consideration, as possible internal determinants of corporate financial flexibility. To achieve the objectives of the study, secondary data covering the period 2013-2021, of 40 listed manufacturing listed firms at Amman Stock Exchange, had been collected and used in the analysis and hypotheses testing. Employing both of the simple and linear regression methods in hypotheses testing, and at the individual level of independent variables, the result reveals a significant impact of profitability, assets tangibility, cash holdings, and capital structure, and insignificant impact of retained earnings, on corporate financial flexibility. Moreover, a combined grouping significant impact, the result shows for the different firm specific factors, as a single group, on financial flexibility. The study recommends more investigations regarding financial flexibility and its internal and external macroeconomic determinants.

Keywords: Corporate Financial Flexibility, Assets Tangibility, Cash Holdings, Capital Structure, Retained Earnings, Firm Specific Factors
JEL Classification: M41

1. INTRODUCTION

Financial flexibility is an important issue nowadays in business environment. Firms are classified to financially flexible or non-financially flexible, but each firms try to have enough financial flexibility. When a firm has enough financial flexibility, it can exploit the most profitable investing options. Financial flexibility is important to business organizations, and it contributes in success, growth, and expansion for firms having this flexibility. When a business organization has financial flexibility, it can exploit the available investment and alternatives. Financial flexibility means that the firm has debt capacity, where debt capacity refers for the amount of debt that a firm can bear, taking into consideration the firm financial policy constraint (Mahmoud, 2019). In other words,

a firm is financially flexible when it has enough debt capacity, and financial flexibility refers to the amount of money that a firm can borrow.

Financial flexibility is considered as a comprehensive strength for a business organization because it leads to a reduction in financial risk, and it is used as a financial resource, to face the dynamic changes and uncertainties in the financial environment (Zhao and Zhang, 2010). In addition, financial flexibility of business organization is associated with investment, and necessary for encountering environmental uncertainty and financing constraints (Zhang et al., 2020). When firms have no financial flexibility, it cannot exploit several profitable investing available options. Therefore, firms having no financial flexibility cannot maximize

its value and cannot increase the wealth of its shareholders. Normally, capital is a scarce resource, and the shortage of money is considered one among the most important problems that firms face these days. Actually firms can acquire capital from equity through the direct contributions by shareholders, or through debt occurring through borrowing or issuance of bonds. When a firm reaches the upper limit of debt, this means that it cannot borrow more, and therefore it cannot exploit investment options. As a result, firms having no financial flexibility are unable to maximize its value, and cannot grow, expand, or increase the wealth of its shareholders.

Many business organizations of Jordan are struggling these days of low investment, profit reduction, and survival. Therefore, to face the low level of investments, which prevents business organizations from profitability, which is considered essential for survival, these organizations are required to focus on its financial flexibility to be able to enter into new investments, and achieve higher profits and insure its continuous. The focus on financial flexibility may be difficult when no enough information is available regarding the determinants and drivers of financial flexibility, especially the internal determinants, where the management of firms have a control over these determinants. As a result, the problem of the study is to determine the most important internal variables that can improve or reserve the financial flexibility of business organizations in Jordan. The problem of the study can be better expressed through the following question. What are the most important internal determinants of financial flexibility of listed manufacturing firms at Amman Stock Exchange (ASE)? Answering this question requires enough consideration of the related theoretical and empirical related literature and gathering the related actual data.

The study is important since its findings provide beneficial information regarding the internal determinants of financial flexibility, so firm managements can concentrate on these determinants and can influence the determinants to be in a situation of good financial flexibility, where firms can borrow to invest in more profitable investments, and can maximize its value and increase the wealth of shareholders. The study contributes to the current available literature and can offer the possible solutions of firms encountering low investment and less profitability, to ensure its long-range survival.

The key objective of the study is to identify the most firm specific determinants of financial flexibility of the listed manufacturing firms at ASE. The focus of the study on the internal determinants of financial flexibility, because these internal determinants are under the control of firm managements, so firms looking for financial flexibility can take actions to influence its financial flexibility in a way that enhance investment, and to face the environment uncertainties and face the turbulent or changing business environment. Another objective of the study, is to add more to the current literature regarding financial flexibility and its internal under control determinants.

The remaining of the study is organized as follows. Section 2 presents the theoretical literature and the related prior research.

The hypotheses of the study are developed and listed section 3, whereas section 4 shows the methodology that is followed in the study. Section 5 presents the results and discussion, while the findings of the study are shown in section 6.

2. LITERATURE REVIEW AND PRIOR RESEARCH

The roots of financial flexibility concept can be traced to Modigliani and Miller (1963), when they stated that building and reserving financial flexibility by a firm through unused borrowing power can be accomplished through low issuance on debt and through retaining a portion of earnings to increase firm internal equity. They also referred that issuance of debt increases financial leverage and therefore offers the tax shield advantage, but this high-level of leverage leads to a reduction in borrowing power. In this argument, there is a recognition of the idea that leverage is one of the most important determinant of financial flexibility. Therefore, several forms the financial flexibility may take including, cash holding, debt capacity, stable cash flows, high scores of financial flexibility, and low leverage (Mahmoud, 2019).

Because scholars and other interested people with the concept of financial flexibility, each of them looks for financial flexibility from a different corner or aspect, no consensus is available regarding the definition of financial flexibility among the different parties. Early, Donaldson and Agapos (1971), defined financial flexibility as "the capacity to redirect the usage of financial resources in a manner consistent with the evolving goals of management while it responds to recent related information to the firm." Byoun (2020), and Denis (2011), define financial flexibility, focusing on a firm ability to access business funding at a low cost and a short notice to respond to unexpected changes in cash flows on investment opportunities." In addition, the AICPA (1993), defines financial flexibility as "the ability to take actions that will eliminate an excess of required and expected cash payments over expected resources," (Sayyad and Ulvenas, 1993) where the focus in this definition on the reallocation of financial resources. The FASB (1984), also defines financial flexibility as the entity's ability to take effective actions to change the cah flows timing and amounts (Sayyad and Ulvenas, 2012). Based on the above definitions, the authors can define financial flexibility as the process of funds reallocation in a way that the entity can inter to the most optimal future possible investments.

In brief financial flexibility can be defined as the availability of financial resources for the purpose of encountering any unexpected needs of money and to exploit future investment opportunities.

Graham and Harvey (2001), classified financial firms into financial flexible and nonfinancial flexible based on issuance decision, and determined that a firm is considered financially flexible when there are no constraints for issuance decisions, and when the firm has sufficient liquidity, so it can react to cash flow shocks, and can exploit the available investment opportunities immediately when appeared. The debt capacity of a firm is viewed as the amount of debt that a firm can bear, taking into consideration the financial

policy constraints. The amount of this debt is the upper limit of debt that a firm able to hold with no coincide with a default threshold. The default threshold of a firm is the critical debt ratio or figure which ceases its existence when it exceeds this ratio or figure (Brennan and Schwartz, 1978).

Several theories are related for financial flexibility. John Maynard Keynes developed the Liquidity Preference Theory (LPT), where this theory states that investors prefer cash. The LPT suggests that because of their preference for cash, investors need higher rate of return for long-term investments, while they accept low rate of return for short-term investments. Keynes stated that there are three motives for investors' preference of liquidity. First, firms prefer holding liquidity to pay for its day-to-day operations, where this is called transaction motive. Second, firms hold higher amounts of cash as a safeguards against the unexpected future problems, and this motive is called precautionary motive. Third, firms prefer holding high amounts of cash to exploit opportunities that may result from the occurrence of economic crisis, and this motive is called speculative motive (Islam et al., 2022).

Inventory Management Theory (IMT) is also related to the concept of financial flexibility. IMT is based on transaction motive. It demonstrates that holding cash is better than holding inventory because holding cash is less costing than inventory. This theory demonstrates that holding too much cash with low inventory is costly, and in opposite holding high level of inventory leads to cash shortages and this is also costly, and therefore the least costing procedure is to hold an optimal level of cash and optimal level of inventory at the same time. In brief, inventory shortage will cease operations and costs will be high, and keeping high inventory and low cash will increase the cost of keeping inventory, and no cash will be available to pay for day-to-day operations, and in this case borrowing is the solution, where borrowing is costing and decreases the financial flexibility of firms.

The Positive Accounting Theory (PAT) states that managers' choice of accounting policies depends on bonus plan hypothesis, debt covenant, and political cost, where these three issues create agency and political costs, where these costs are associated with earnings quality.

2.1. Internal Financial Flexibility Determinants
The related literature to financial flexibility referred for different firm specific determinants of financial flexibility including, profitability, asset tangibility, credit ratings, industry averages, payout policy, cash holdings, capital structure, retained earnings, investment opportunities, and financing cost.

Capital structure is considered the most important internal determinant of financial flexibility. Within the context of capital structure, Modigliani and Miller had an important contribution to capital structure relation with financial flexibility. Several theories were issued regarding the capital structure of business organizations. Capital structure is related to the borrowing capacity of firms. When the capital structure of a firm is consisted of low debt and much equity, this often refers for the need and possibility of borrowing when a profitable investment opportunity appeared,

or a need for capital emerged. In opposite, in case where the capital structure of a firm consists of high debt and low equity, this means that the firm cannot borrow more, and therefore can't exploit an attractive opportunity of investment, or satisfy the emerged need for cash. Despite that Modigliani-Miller theory (1958), states that the firm value is irrelevant to debt, but often firms avoid more borrowings, just to keep a reasonable market value(Obeidat, 2021).

According to the content of the pecking order theory, the firm capital structure is driven by the desire of funding new investment, where firms try to fund its investments internally, followed by the option of low-debt risk, and equity is the last resort. The pecking order theory states that firm low leverage can be achieved by keeping more retained earnings, and maintaining high cash and short-term marketable securities. When a firm keeps more retained earnings, cash balances, and marketable securities, this pattern will decrease its leverage and therefore, increase the firm borrowing power, and as a result, it will achieve a financial policy. According to the pecking-order theory, business organizations can generate funds through debt and equity, and firms prefer equity when this source of capita is available, and prefer debt when external financing is required.

The trade-off theory refers for that using debt in the capital structure of a business organization is useful for those organizations, since the use of high debt in the capital structure leads to tax benefits, so using more debt is preferable by the managements of business organizations, and these managements are required to make a balance between tax shield and debt cost cost (Serghiescua and Văideanb, 2014). The idea concluded from the trade-off theory is that firms are required to determine the level of debt in capital structure through the comparison between the cost and benefits of debt, where the optimal level of debt is achieved when the margin present value of interest tax shield equals the marginal present value of financial distress cost.

The marketing timing theory states that when the market value of shares is higher than its book value and higher than its prior market value, equity shares are issued in this time, while these shares are bought when its value is lower than the book value (Obeidat, 2021).

The payout ratio is assumed to affect the firm financial flexibility. A firm follows low payout ratio, means that the firm retain a large portion of its earnings to be used later in funding new investments, and avoiding the issuance of debt, where this procedure keeps low-leveraged firm, and enough financial flexibility. Decreasing the payout ratio leads to an increase in retained earnings, where this leads to low debt and more spare debt capacity, and therefore more financial flexibility. In the context of payout policy, King'wara (2015), found that the probability and amounts of dividends decrease by the increase in financial flexibility.

2.2. Financial Flexibility Measurement
The literature refers for several ways for the measurement of financial flexibility. Obtaining financial flexibility can be accomplished through cash holding, unused capacity of debt, and dividends. Therefore, a firm can be financially flexible when it holds extra amounts of cash, where it can use these amounts

whenever there is a profitable investment perspective, or when an unexpected need for cash arise (Myers and Majluf, 1984). In addition, financial flexibility can be achieved through reserving unused capacity of borrowing, where it can borrow smoothly when there is a need for cash appears (Graham and Harvey, 2001). Moreover, firms can be financially flexible when low or no dividends are paid to shareholders, so it can use these retained earnings to satisfy its unexpected needs of cash or use these amounts in investment options (Lie, 2005). To be financially flexible, firms can use mix of cash holding and unused debt capacity, or a mix of unused debt capacity and dividends, despite that sometimes, most firms find difficult to use a mix of three resources of financial flexibility.

The current study follows the method of Myers and Majluf (1984) in measuring financial flexibility. In other words, the study uses cash holdings as an indicator or measure of a firm financial flexibility, where a firm cash holding is compared with the industry cash holdings.

2.3. Prior Research
Actually, despite the importance of financial flexibility to business organizations and its financial and investment policies, but unfortunately, the determination of factors and issues affecting the financial flexibility does not receive enough attention by academics and practitioners, whether in the Middle East countries or in West and East Countries. Few studies took attempted to determine the factors affecting the financial flexibility of corporate business organizations.

An attempt to determine the entire factors, whether internal or external factors, affecting the financial flexibility, had been done by Mahmoud (2019) in Pakistan. The key goal of the study was to examine the different measures of financial flexibility, and to investigate the issues affecting the existence of financial flexibility. With regard to the determinants, the study took into consideration the entire factors that may have effect on financial flexibility including, firms specific financial, country specific dynamics, and corporate governance characteristics. The study also investigated the moderating effect of ownership concentration, managerial ownership, group affiliation, life cycle stage, and CEO duality. Secondary data covering the period 1991-2014, using unbalanced panel of 193 nonfinancial listed firms in Pakistan Stock Exchange, had been collected and used in the analysis and hypotheses testing. Descriptive statistics, correlation, and panel logistic regression, are the statistical methods used in the analysis and hypotheses testing. The study showed that the best measure for financial flexibility is low leverage, followed by the modified Altman z score, but the remaining measures are found good measures including Altman z score, spare debt capacity, cash flow volatility, and cash holding. With regard to the determinants of financial flexibility, the results of the study showed that firm specific financial, corporate governance, and country specific financial, all have an impact and contribute in financial flexibility. The study showed that among the firm specific factors affecting financial flexibility are, firm size, tangibility, dividend, and firm age. Moreover, the study found that ownership concentration, managerial ownership, group affiliation, life cycle stage, and CEO duality, all having a moderating effect.

Wang and Jiang (2023), carried out a study as an attempt to determine the factors affecting the financial flexibility of business organizations. In the study, factor analysis had been first employed to reduce dimension. Secondary data of 6 sectors in U.S.A including, basic materials, consumer cyclical, energy, industries, technology, and utilities, had been collected and used in the analysis and hypotheses testing. The results showed that there is a positive relationship between external financing and financial flexibility, and there is a negative relationship between firm value and personal tax rate in one hand, and financial flexibility, in the other hand. The results of the study also showed that there is no relationship between leverage and financial flexibility.

Joseph (2021), carried out a study aiming for determining the common determinants of corporate financial flexibility and investment efficiency of the listed nonfinancial firms at JSE. To achieve the objective of the study, secondary data covering the period 2000-2019 of 106 listed nonfinancial firms at JSE, had been collected and used in data analysis and hypotheses testing. Employing the appropriate regression methods such as, the random effect model, fixed effect model, and systems generalized method of moments, the results demonstrated that financial flexibility decreases with an increase in leverage, investment opportunities, and financing costs, but it increases with profitability, cash and cash equivalents, and assets tangibility.

Islam et al. (2022), investigated the impact of earnings quality on financial flexibility, and the moderating role of corporate governance on the effect relationship of earnings quality on corporate financial flexibility. The secondary data covering the period (2007-2028), of 2034 nonfinancial listed Chinese firms, had collected, Several tests are used in data analysis including the mean, standard deviation, and collinearity, had been used in data analysis, and the regression method is used in hypotheses testing. The empirical results showed that weak earnings quality leads to negative consequences on financial flexibility, and corporate governance plays a significant positive moderating role on the effct of earnings quality on financial flexibility. In brief, the results showed earnings quality has a significant impact on financial flexibility, so weak earnings quality reduces the financial flexibility, while strong earnings quality increases the corporate financial flexibility.

Al-Luhaibi and Al-Mizori (2022), carried out a study with an objective of determining the impact of working capital on the financial flexibility of Iraqi listed firms in Iraq Stock Exchange. To achieve the objectives of the study, the secondary data covering the period 2012-2021, of a sample consisted of 11 firms from different industries, had been collected and used in the analysis and hypotheses testing. Employing the multiple linear regression method, the results showed that the working capital has a significant impact on the financial flexibility of different firms of different industries.

Osman and Purwanto (2022), carried out their study with the purpose of investigating to determine the impact of some firm financial ratios of its financial flexibility and distress of consumer goods manufacturing listed firms at Indonesia Stock Exchange.

The secondary data covering the period 2017-2020, of 8 consumer goods manufacturers satisfied the requirements, had been collected and used in the analysis. Employing the Random Effect Model, and based on the multiple regression method, the results showed that return on assets has a negative significant impact on financial flexibility. The results also revealed that debt to equity ratio is the most important factor affecting financial flexibility, while market to book value is the most influential factor on financial distress. In more details, the results showed that return on assets, current ratio, debt to equity ratio, market to book value, and cash holdings, each of which, has a significant impact on financial flexibility.

Aiming for determining the relationship between financial flexibility and dividends payouts, King'wara (2015), carried out a study in the context of financial flexibility. To achieve this goal, the author collected a secondary data covering the period 2008-2012, of 40 listed nonfinancial firms at Nairobi Stock Exchange, and used this data in the analysis and hypotheses testing. Employing the ordinary least square method in hypotheses testing, the study showed that there is a significant relationship existing between firm financial flexibility and its dividends policy, and firm's value of financial flexibility has a strong effect on its payout policy. The results also revealed that the probability and amount of dividends decrease by the increase in financial flexibility.

Hess and Immenkötter (2014), estimated the debt capacity of a firm as the critical debt ratio, which leads to the downgrade in creditworthy. The authors referred that unused debt capacity depicts the temporal access to external financing and measuring a firm financial flexibility. The study is based on secondary data covering the period 1985-2012 of nonfinancial listed firms at COMPUSTA in US. The results showed that firms having unused debt capacity can inter to profitable investing perspectives, since it can borrow to finance the available investment options, whereas firms having no debt capacity issue equity or pay some of its outstanding debt, to inter new investment. The most important conclusion of the study is that it showed a strong evidence of association existing between financing policies with the availability of external debt funds and investment opportunities.

Khoramin et al. (2013), carried out a study with a purpose of investigating the relationship between profitability, financial flexibility, investment opportunities, and dividends policy of the listed firms at Tehran Stock Exchange. To achieve this objective, the secondary data of all listed firms having the required data along the period 2008-2012, had been collected and used in the analysis and hypotheses testing. Therefore, a total of 565 firms found that they have the required information. Employing the multivariate regression method, the results showed a significant relationship exists between firms' profitability and its investment opportunities. The results also revealed that a significant relationship exists between the firms' financial flexibility and its dividend policy.

Sayyad (2012), investigated the different sources of financial flexibility that enables firms to respond towards negative investment shocks. The study took into consideration investment and dividend policies. The secondary data covering the period 1995-2011, of the listed firms at OMXS30, had been collected and used in the analysis and hypotheses testing. The results showed

a cross sectional differences regarding the way firms solve cash shortfalls.

3. RESEARCH HYPOTHESES

Based on the literature review and prior related research, and confining with the internal determinants of financial flexibility, several hypotheses had been developed, and listed below, in its null form, as follows.

Ho1. There is no significant impact of the profitability of listed manufacturing firms at Amman Stock Exchange on the financial flexibility of these firms.

Ho2. The assets tangibility of the listed manufacturing firms at Amman Stock Exchange has no significant impact on the financial flexibility of these firms.

Ho3. The cash holdings of the listed manufacturing firms at Amman Stock Exchange has no significant impact on the financial flexibility of these firms.

Ho4. There is no significant effect of the capital structure of the listed manufacturing firms at Amman Stock Exchange, on the financial flexibility of this type of firms.

Ho5. The retained earnings of the listed manufacturing firms at Amman Stock Exchange has no significant impact on the financial flexibility of these firms.

Ho6. There is no combined significant impact of profitability, tangibility, cash holdings, capital structure, and retained earnings, on corporate financial flexibility of the listed manufacturing firms at Amman Stock Exchange.

4. METHODOLOGY

The population of the study encompasses the different manufacturing shareholding firms of Jordan, where in total, there are 48 listed manufacturing firms at Amman Stock Exchange, by the end of 2022. Because the study is a time series, the secondary data of all listed firms having the required continuous information along the period of the study, starting from 2012 and extends to the ending of 2021, had been collected. Eight firms were excluded because their listing was suspended in some years of the previously mentioned study period. As a result, the data of the remaining 40 firms had been collected and used in the analysis and hypotheses testing.

The corporate financial flexibility is the dependent variable of the study. With regard to financial flexibility as the single dependent variable, it can be measured by different ways. Arslan (2014) method of measuring flexibility, where using this method, financial flexibility is measured using multiple indicators including financial leverage and cash holdings. Marchica and Mura (2010), measured financial flexibility using a single indicator method of either financial leverage or cash holdings. The current study follows Marchica and Mura (2010) measure, and measured financial flexibility using the cash holding as a good indicator for firm financial leverage. Cash holding is computed using the ratio of cash and cash equivalents to total assets, and compared with the same ratio of the industry, as follows.

Cash flexibility (CF) = (Corporate cash holdings − average
industry cash holdings)   (1)

Therefore, the higher the cash holdings, the higher financial flexibility. In more accurate words, when the firm cash holding is higher than the industry cash holding, the firm is considered financially flexible and given 1, in that year. In opposite, when the firm cash holding ratio is found less than the industry cash holdings in 1 year, it is given 0 for that year. Therefore, the process of measuring financial flexibility is binary or follows the binomial distribution.

Several independent variables are taken into consideration in the study. The first independent variable is profitability. When a firm achieves enough profits, it can use a portion of this profit for its profitable and attractive investment perspectives. Return on Assets (ROA), is considered the best indicator of profitability, since it takes into consideration the income and total assets. In the current study, net income is divided by total assets to compute ROA. Table 1 reveals more details regarding the computation of ROA and other variables, whatever the type of that variable, dependent, independent, or control variable.

Assets tangibility is taken into consideration as an another independent variable assumed that it affects firm financial flexibility. Assets tangibility refers for the proportion of tangible assets to total assets. Assets tangibility leads to an increase in the borrowing of business organizations. As more net fixed assets a firm owns, as more debt the firm can receive, with less cost. Tangible assets can be used as collateral introduced for the loans and other debt. Assets tangibility ratio is computed by dividing tangible fixed assets by total assets. Table 1 shows more details regarding the computation of tangible assets ratio.

Cash holding is also one among the independent variables that the current study takes into consideration. Cash holding is cash and cash equivalents relative to total assets (Kling et al., 2014). Therefore, cash holding is measured in the study through the relation of cash and cash equivalents to total assets. Table 1, shows the equation used in the computation of cash ratio.

Capital structure is an independent variable the study investigates whether it affects financial flexibility. Normally, capital structure refers for the proportion of debt to total assets, or the ratio of shareholders' equity to total assets. Normally, more debt in capital structure means that the firm depends more on borrowing in financing its operations and investments, while in opposite, more equity in the capital structure means that the firm attempts to avoid using more debt in its capital structure. Nevertheless, the debt to total assets is considered the best ratio indicating using debt in capital structure. Capital structure is measured through debt ratio, which is computed as using the table appearing in Table 1.

Retained earnings is also one among the several independent variables taken into consideration in the study. Retained earnings is one important shareholders' equity accounts, and refers for the profits retained by firms to be used in growth and in funding its investment perspectives. Retention ratio is used an indicator for retained earnings, where it is computed in the study through dividing retained earnings by the number of common shares outstanding. Table 1 shows the equation (Yemi and Seriki, 2018).

Firm size is used as a control variable in the tests of different hypotheses. Whether simple or multiple linear regression is used in testing that hypothesis. Firm size is used through the base-10 natural logarithms of total assets, as appearing in Table 1.

Simple and multiple linear regression methods are used in testing the hypotheses of the study, where all hypotheses are tested under 0.95 level of confidence, which is equivalent to 0.05 (1-0.95) coefficient of significance. With regard to decision-base criterion for the null hypotheses acceptance or rejection, when the computed t-value or f-value is less than the corresponding tabulated one, the null hypotheses is accepted, while in opposite, when the computed t or f-value is higher than the tabulated corresponding one, the null hypothesis is rejected. Another criterion for the decision base rule is to accept a null hypothesis when the computed coefficient of significance is higher the predetermined one, which equals 0.05, and to reject the null hypothesis when the computed coefficient of significance is less than the predetermined.

Table 1: Variables measures

Variable	Variable symbol	Variable type	Variable measure	Equation
Fin. Flexibility	Cash Holding	Dependent	FFR	Firm Cash Holding – Industry Cash Holding
Profitability	ROA	Independent	ROA	$\dfrac{Net\ Income}{Total\ Assets}$
Tangibility	Tan. Assets Ratio	Independent	TAS	$\dfrac{Fixed\ Assets}{Total\ Assets}$
Cash Holding	Cash Ratio	Independent	CRO	$\dfrac{Cash\ \&\ Cash\ Equivalents}{Total\ Assets}$
Capital Structure	Debt Ratio	Independent	DTR	$\dfrac{Total\ Liabilities}{Total\ Assets}$
Ret. Earnings	Retention Ratio	Independent	RNR	$\dfrac{Retained\ Earnings}{No.of\ Common\ Shares\ Outstanding}$
Firm Size	Log. Assets	Control	LTA	Base-10 natural logarithms of total assets

5. RESULTS AND DISCUSSION

5.1. Descriptive Statistics

This study is based on financial flexibility as the single dependent variable and five independent variables. To insure that the data is appropriate and valid for analysis, several descriptive statistics are computed using the Statistical Package of the Social Sciences (SPSS). Specifically, the mean as the most efficient indicator of central tendency, and the standard deviation, as an appropriate measure of dispersion, were used in this context, in addition to the least and maximum values for each variable, whether it is dependent, independent, or control variable. Table 2 shows more details regarding the descriptive statistics used in data analysis.

Table 2 shows that the mean of financial flexibility is 0.356 with 0.479 standard deviation. Financial flexibility is a binomial variable, where a firm is financially flexible in a period when its cash holding ratio in that period is equal or greater than the cash holding average of the industry, and it is given in this case 1, where in opposite, it has no financial flexibility, when the firm cash holding ratio is less than the average cash holding ratio of the industry, and it is given zero in this case for that period. Based on the average of financial flexibility, which equals 0.356, it is concluded that firms were not financially flexible in most periods, and flexible less number of periods. The standard deviation of financial flexibility is also high, where this refers to a high level of variation in financial flexibility.

Considering the mean of profitability, as an independent variable, it is clear that 0.001 mean of ROA is too low, where this refers for that the manufacturing listed firms at ASE did not achieve reasonable profits, and these profits sharply vary from one to another firm. ROA values refer that most manufacturing firms encounter financial difficulties, where profits are necessary for firm survival. Asset tangibility refers for the ratio of fixed assets to total assets, where a mean of 0.351, means that enough proportion of firm assets are fixed, and this is because all of these firms are manufacturing and distributed among different manufacturing industries, such as mining, food, pharmaceutical, engineering, et al. The mean of cash holding ratio seems low, where this mean equals 0.079, or less than one percent of total assets.

Considering the debt ratio as a measure of capital structure, it is clear that the liabilities of some firms are greater than its total assets. The maximum value of debt to total assets ratio, as appearing in Table 2, equals 1.9, where the firm recorded such value, means that the firm incurred high losses along several years.

Nevertheless, the mean of debt ratio seems reasonable, where this mean equals 0.396, which means that <40% of capital structure comes from debt and more than 60% is funded by equity. The mean of retained earnings is −1.06 and seems also low, where this is justified by low or no profits for some firms for several continuous years, and no profits were available to retain a portion of these profits.

Total assets, as an indicator for firm size, is used as a control variable, and measured through the base-10 natural logarithms, has a mean of 7.38 and a standard deviation of 0.634, where the minimum is 5.51, and the maximum value is 9.18, where these values show high variation in the total assets among firms. The variation of total assets can be attributed to the difference in industries, where for example mining and extraction firms use large total asset, while some firms as of textiles and food firms use less total assets.

5.2. Correlations

The internal correlation among the independent variables is tested to insure that the existed effect of an independent variables on the dependent, is completely attributed to this variable and not both the independent and dependent are affected by other variable. Table 3 shows the correlation coefficient (R) between each independent variable and each of the remaining independent variables. The correlation coefficients are low among the independent variables, except the one between cash ratio and retained earnings ratio. The moderate correlation between cash ratio and retained earnings ratio equals – 0.448, but it is justified because dividends are paid in cash from the available retained earnings. The other internal coefficients of correlation are low, which means that the data can be used for the purposes of analysis and hypotheses testing.

5.3. Data Validity, Collinearity, and Normality

The secondary data of 40 listed manufacturing firms had been collected and used in the analysis and hypotheses testing. In total 4000 observations belonging to 40 firms along 10 years are extracted, classified, and it is tested for validity, normality, and collinearity, before it is used in the analysis and hypotheses testing. Table 4 shows the results of data validity test.

With regard to multicollinearity, Table 4 shows that the Validity Inflation Factor (VIF) of different variables shows that VIF is <10 for the different variables, and the coefficients of tolerance are acceptable because most are higher than 1. Durbin Watson value is also more than 1.50, so it is concluded that the data is valid for analysis.

Table 2: Descriptive statistics

Variable	Variable Type	Minimum Value	Maximum Value	Mean	Standard Deviation
FFR	Dependent	-0-	1.0	0.356	0.479
ROA	Independent	−1.59	0.63	0.001	0167
TAS	Independent	-0-	0.97	0.351	0.213
CRO	Independent	0.0	0.88	0.079	0.155
DTR	Independent	0.02	1,90	0.396	0.304
RNR	Independent	−4.51	1.22	−1.06	0.544
LTA	Control	5.51	9.18	7.38	0.634

5.4. Hypotheses Testing

Except for the last hypothesis, where the multiple linear regression method is used in testing that hypothesis, the simple linear regression method is used in testing the remaining hypotheses, including the first up to the fifth hypothesis. The entire hypotheses had been tested under 0.95 coefficient of confidence, or 0.05 $(1 - 0.95)$, predetermined coefficient of significance. Table 5 shows the results of regression tests that employed for the different hypotheses of the study.

5.4.1. Testing the 1st hypothesis

The assumed impact of profitability on corporate fincial flexibility is examined through hypothesis 1, where the simple linear regression method is the statistical method that used in determining whether corporate profitability affects the corporate financial flexibility. The hypothesis is presented in section 4, for the first time, but it is shown again below, in its null form, as follows.

Ho1. There is no significant impact of the profitability of listed manufacturing firms at Amman Stock Exchange on the financial flexibility of these firms.

Th simple regression test shows that R (coefficient of correlation) equals 0.166, and R^2 (coefficient of determination) is 0.028. This means that there is a type of correlation between profitability and financial flexibility, and that profitability explains only 2.8% of the change taking place in corporate financial flexibility.

Table 5 shows that the attributed computed t-value is 3.358, and that P-value (sig.) equals 0.001. Comparing the computed t-value

with its corresponding tabulated one, which equals 1.96, the comparison reveals that the computed one is higher. Moreover, comparing p-value with its corresponding predetermined one, that equals 0.05, the comparison reveals that the computed one is less. As a result, since the computed t-value is higher than the computed, and because the computed P-value, is less than the predetermined, the null hypothesis is rejected, whereas instead, its alternative one is accepted. This means that corporate profitability has a positive significant impact on corporate financial flexibility. Solving for unknowns, the simple linear regression model that represents hypothesis, appears as follows.

$$FFL = 0.355 + 0.479ROA - 0.04LAT + 0.143 \qquad (2)$$

5.4.2. Testing the 2nd hypothesis

The second hypothesis is developed for testing the impact of assets tangibility on corporate financial flexibility, or to determine whether assets tangibility is an internal determinant of corporate financial flexibility. As of the first hypothesis, the simple linear regression method is used in testing the second hypothesis. The second hypothesis is listed again, in its null form, as follows.

Ho2. Assets tangibility of the listed manufacturing firms at Amman Stock Exchange has no significant impact on the financial flexibility of these firms.

When the simple linear regression method is run, it reveals that R equals 0.223, and r^2 equals 0.050. This two values mean that there is a positive correlation between assts tangibility and corporate financial flexibility, and that assets tangibility explains 5% of change in financial flexibility.

The results acquired by the simple regression test reveals, as appearing in Table 5, that the computed t-value is −4.563, and the computed P-value (sig.) is very close value to zero. The comparison between the computed t-value and the tabulated, which equals 1.96, reveals that the computed one is higher. In addition, the comparison between the computed P-value and the predetermined one, that equals 0.05, reveals that the computed is less than the predetermined. Therefore, the null hypothesis is rejected, whereas, its alternative one is accepted. This result means that a negative significant impact of assets tangibility, exists, on corporate financial flexibility. Actually, this negative impact can be justified for that firms' ownership of more tangible assets encourage these firms to receive more debt, with collateral of tangible assets, so more borrowing leads to a reduction in the corporate financial flexibility. Solving for unknowns, the simple linear regression model representing the second hypothesis, is as shown below.

Table 3: Internal correlation coefficients among independent variables

Variables	CRO	ROA	CSR	TAS	REA
CRO	1.0	0.056	−0.078	−0.252	−0.448
ROA		1.0	−0.228	−0.256	0.575
CSR			1.0	0.276	−0.165
TAS				1.0	0.007
REA					1.0

Table 4: Data validity test

Variables	Multicollinearity		Durbin Watson
	VIF	Tolerance	
CSR	1.626	1.23	
ROA	1.976	1.51	
DTR	1,156	1.35	1.648
TAR	1.251	1.44	
RER	3.216	1.012	
LAT	1.589	1.33	

Table 5: Simple linear regression coefficients

Hypothesis	R^2	Df.	Unstandardized coefficients		Standard coefficients		
			B-value	Standard error	Beta	T-value	Sig.
Ho1	0.03	398	0.479	0.143	0.166	3.358	0.001
Ho2	0.050	398	−0.502	0.110	0.223	−4.563	0.000
H03	0.303	398	1.707	0.130	0.551	13.144	0.000
Ho4	0.024	398	−0.246	0.078	−0.156	−3.147	0.002
Ho5	0.005	398	0.000	0.019	−0.067	−1.344	0.180

FFL = 0.532 - 0.502TAS - 0.110FSZ - 0.02 (3)

5.4.3. Testing the 3rd hypothesis

The authors developed the third hypothesis to examine whether there is an influence of cash holdings on corporate financial flexibility. As of the preceding two hypotheses, the simple linear regression method is employed in testing the third hypothesis. Again, the third hypothesis is presented below, in null form, as appearing below.

Ho3. The cash holdings of the listed manufacturing firms at Amman Stock Exchange has no significant impact on the financial flexibility of these firms.

The simple linear regression test regarding the third hypothesis, reveals a 0.551 value of R, and a 0.301, value of R^2. This means that there a moderate level of correlation between cash holding and financial flexibility, and that cash holdings explains 30.1 percent of change occurring to corporate financial flexibility.

Table 5 demonstrates that the test shows a 13.144, t-vale, and zero p-value. The comparison between the computed and the tabulated t-values, reveals that, the computed one is higher, and comparing the computed p-value with its corresponding predetermined one, the comparison shows that the computed P-value is less, where this means that, the null hypothesis is rejected, and its alternative one is accepted. This result means that there is a positive significant effect of cash holdings on financial flexibility of the listed manufacturing firms at ASE. When the coefficients became known, the simple linear regression method appears as follows.

CFF = 0.222 + 1.707CHD + 1.631 (4)

5.4.4. Testing the 4th hypothesis

The capital structure is taken into consideration in the study through the fourth hypothesis, where the hypothesis is developed to enable testing whether capital structure has a significant impact on corporate financial flexibility of the listed manufacturing firms at ASE, and whether the debt in the capital structure is one among the internal determinants of financial flexibility. As of the prior hypotheses, the simple linear regression method is used in testing the fourth hypothesis. The fourth hypothesis is listed again, in its null form, as shown below.

Ho4. There is no significant effect of the capital structure of the listed manufacturing firms at Amman Stock Exchange, on the financial flexibility of this type of firms.

Employing the simple linear regression method, the test shows that the R equals 0.156, whereas R^2 equals 0.024. Considering these two values of correlation and determination coefficients, it is a parent, that there is low correlation between the capital structure and the financial flexibility of the manufacturing shareholding firms of Jordan, and that the capital structure of this type of firms, explains just 2.4% of the change occurring to the corporate financial flexibility.

Table 5 shows the related statistics regarding the fourth hypothesis. The table shows that the computed t-value is −3.147,

and P-value equals 0.002. Comparing the computed t-value with the tabulated, which equals 1.96, the comparison reveals that the computed one is higher, and comparing the computed p-value with the predetermined one, that equals 0.05, the comparison reveals that the computed one is less. Based on these values, the null hypothesis is rejected, and the alternative one is accepted. This result refers for the existence of a negative significant impact of capital structure (measured by debt ratio) on the financial flexibility of corporate manufacturing listed firms of Jordan. The result agrees the results of different prior research within the subject. This result provides the evidence for the existence of effect of capital structure on the corporate financial flexibility of the manufacturing shareholding firms. The negative impact is within the logic, because the normal situation is that using more debt, leads to less financial flexibility. Solving for unknowns, the simple linear regression model representing the third hypothesis, with the base10 natural logarithms of total assets to represent firm size, appears as follows.

FFR = 0.453 - 0.246 DTR - 0.078 (5)

5.4.5. Testing the 5th hypothesis

The fifth hypothesis had been developed to enable testing whether the retained earnings of the listed manufacturing firms at ASE affect the corporate financial flexibility of these firms. In other words, the fifth hypothesis had developed to test, among different things, whether the retained earnings is an internal determinant of corporate financial flexibility. The simple linear regression method, as of prior hypotheses, had been employed in testing the fifth hypothesis. The fifth hypothesis is listed again, in its null form as shown below.

Ho5. The retained earnings of the listed manufacturing firms at Amman Stock Exchange has no significant impact on the financial flexibility of these firms.

The simple linear regression reveals 0.067 coefficient of correlation (R), and 0.005 coefficient of determination (R^2). The value of R means that there is no or weak correlation between retained earnings and corporate financial flexibility. In addition, the value of the coefficient of determination refers for that retained earnings plays no or a very weak role in determining financial flexibility, and therefore retained earnings explains <1% of the change taking place in financial flexibility.

Table 5 shows that the computed t-value equals −1.344, and the computed coefficient of significance (P-value) equals 0.180. Comparing the computed t-value with its corresponding tabulated one, which equals 1.96, the comparison shows that the computed t-value is less than its corresponding tabulated one. Moreover, comparing the computed coefficient of significance, with the predetermined one, which equals 0.05, the comparison demonstrates that the computed one is greater than the predetermined. Therefore, because the computed t-value is less than the tabulated, and because the computed coefficient of significance is greater than the predetermined, the null hypothesis is accepted. This result means that retained earnings has no significant impact on the corporate financial

flexibility of the listed manufacturing firms at ASE. This result is acceptable at 0.1 coefficient of significance, which means that retained earnings has a weak negative impact on financial flexibility, but under the predetermined coefficient of the study, which equals 0.05, no choice other than accepting the null hypothesis.

$$FFR = -0.354 - 0.000036REA + 0.000 \qquad (6)$$

5.4.6. Testing the 6th hypothesis

The 6th and the last hypothesis takes into consideration the different independent variables in order to examine the combined impact of the entire variables together, on the corporate financial flexibility. The sixth hypothesis is shown again, as follows.

Ho6. There is no combined significant impact of profitability, tangibility, cash holdings, capital structure, and retained earnings, on corporate financial flexibility of the listed manufacturing firms at Amman Stock Exchange.

The multiple linear regression method is employed in testing the impact of the combined effect of the entire independent variables, as one group, on the corporate financial flexibility of the listed shareholding manufacturing firms of Jordan. Firm size, measured by the base-10 natural logarithms, is used as a control variable. The results of multiple regression method, reveal that R equals 0.582, and R^2 is 0.339. The value of R demonstrates that there is a correlation between the entire group of independent variables, when taken together as one group, and, and the corporate financial flexibility. In addition, the value of R^2 means that the entire independent variable, when taken together as one group, explain exactly around 40% of the change taking place in corporate financial flexibility. The value of the coefficient of determination is justified by the external and economic variables that the prior research found that these variables having a strong impact on financial flexibility, while the current study focuses only on internal firm specific determinants of corporate financial flexibility. In addition to the firm specific determinants, there are country specific determinants, and a group of macroeconomic variables, while the current study investigates only the most common firm specific determinants of corporate financial flexibility.

As appearing in Table 6, f-value equals 33.524, and P-value (sig.) is zero. When the computed f-value is compared with its corresponding predetermined one, which equals 3.319, the comparison reveals that the computed one is too much higher than the tabulated. In addition, the comparison between the computed

and the predetermined P-values, it is apparent that the computed p-vale is less than the predetermined one, that equals, 0.05. Based on the results received based on using the multiple regression of the computed f-value and p-value, the null hypothesis is rejected, and instead, the alternative one is accepted. This result means that there is a significant impact of the combined independent variables on corporate financial flexibility, and that the variables including, profitability, assets tangibility, cash holdings, capital structure, and retained earnings, explain a portion of the change occurring to corporate financial flexibility of the manufacturing shareholding firms of Jordan. Table 6, shows the coefficient of the test employed in testing the last hypothesis.

Therefore, when the regression model is solved, it is shown below

$$FFR = -0.051 + 0.254ROA - 0.096TAS + 1.673CRO - 0.122DTR + 0.000RNR + 0.048LTA + 0.256 \qquad (7)$$

6. FINDINGS

The study is an attempt is to identify the most common firm specific determinants of corporate financial flexibility of the listed manufacturing firms at ASE, and objects for determining the most internal factors affecting the corporate financial flexibility. Secondary data attributed to 40 manufacturing firms of different manufacturing industries, had been collected and used in the analysis and hypotheses testing. Employing the simple linear regression method in determining the individual impact of profitability, assets tangibility, cash holdings, capital structure composition, and retained earnings, the hypotheses testing reveals that except for retained earnings, each of the remaining variables that the study takes into consideration, has a significant impact on corporate financial flexibility. In more details, the study shows that a positive significant impact is existing of profitability and cash holdings on corporate financial flexibility, whereas each of assets tangibility and capital structure, has a negative effect on corporate financial flexibility. The study also finds that retained earnings has insignificant impact on financial flexibility. In other words, the results show that profitability, assets tangibility, cash holdings, and debt in the capital structure, each of which, contributes in determine the firm financial flexibility.

In addition to the individual impact of profitability, assets tangibility, cash holdings, and capital structure, the study finds that a combined significant effect of profitability, assets tangibility, cash holding, capital structure, and retained earnings, is existed on corporate financial flexibility.

Table 6: Multiple regression coefficients

Model	Unstandardized coefficients		Standard coefficients			F-Value	Sig.
	B	Standard Error	Beta	t-value	Sig.		
Constant	−0.051	0.256		1.686	0.093	33.524	-0.00-
Profitability	0.254	0.130	0.088	1.954	0.051		
Tangibility	−0.096	0.069	−0.043	−0.938	0.349		
Cash Holdings	1.673	0.134	0.540	12.459	0.000		
Debt Ratio	−0.122	0.069	−0.078	−1.782	0.076		
Ret. Earnings	−0.000	0.000	0.064	1.434	0.152		
Log. Assets	0.048	0.034	0.064	1.434	0.152		

The conclusions of the study are in agreement with Mahmoud (2019), Wang and Jiang (2023), Joseph (2021), and Osman and Purwanto (2022). Because of the importance of financial flexibility, more investigations regarding the possible internal and external determinants of financial flexibility are recommended as future research perspectives, and the relation between financial flexibility and other macroeconomic issues are also recommended to be taken into consideration, such as investment.

REFERENCES

Al-Luhaibi, F.H., Al-Mizori, A.A. (2022), The effect of working capital on financial flexibility: An analytical study in a sample of firms listed in the Iraqi Stock Exchange. Alanbar University Journal of Economic and Administrative Sciences, 14(4), 77-95.

Brennan, M., Schwartz, E. (1978), Corporate income taxes, valuation, and the problem of optimal capital structure. Journal of Business, 51(1), 103-114.

Byoun, S. (2020), The effects of financial flexibility demand on corporate financial decisions. SSRN Electronic Journal, 1, 254.

Denis, D.J. (2011), Financial flexibility and corporate liquidity. Journal of Corporate Finance, 17(3), 667-674.

Donaldson, G., Agapos, A.M. (1971), Strategy for financial mobility. Journal of Economic Literature, 9(1), 120-121.

Graham, J.R., Harvey, C.R. (2001), The theory and practice of corporate finance: Evidence from the field. Journal of financial Economics. 60(2-3), 187-243.

Hess, D., Immenkötter, P. (2014), How Much Is Too Much: Debt Capacity and Financial Flexibility. [CFR Working Paper]. University of Cologne and Center of Financial Research. Available from: https://www.econstor.eu/bitstream/10419/97174/1/784937362.pdf

Islam, M.R., Haque, Z., Moutushi, R.H. (2020), Earnings quality and financial flexibility: A moderating role of corporate governance. Cogent Business and Management, 9(1), 1-27.

Joseph, K. (2021), The Determinants of Financial Flexibility and Investment Efficiency: Some Evidence From JSE-Listed Nonfinancial Firms. [Master Thesis]. South Africa: University of Venda.

Khoramin, M., Taleb Nia, G., VakiliFard, H.R. (2013), The relationship between profitability and financial flexibility, and investment opportunities and dividend policy in companies listed in Tehran stock exchange. Journal of Life Science and Biomedicine, 3(5), 344-351.

King'wara, R. (2015), The relationship between financial flexibility and dividends payouts: A case of listed firms in Kenya. European Journal of Business and Management, 7(3), 51-59.

Kling, G., Paul, S.Y., Gonis, E. (2014), Cash holding, trade credit and access to short-term bank finance. International Review of Financial Analysis, 32, 123-131.

Lie, E. (2005), Financial flexibility, performance, and the corporate payout choice. The Journal of Business, 78(6), 2179-2202.

Mahmoud, Y. (2019), The Determinants of Corporate Financial Flexibility: Empirical Evidence from Listed Firms in Pakistan. [Doctorate Dissertation]. Pakistan: International Islamic University.

Marchica, M.T., Mura, R. (2010), Financial flexibility, investment ability, and firm value: Evidence from firms with spare debt capacity. Financial Management, 39(4), 1339-1365.

Modigliani, F., Miller, M.H.M. (1963), American economic association corporate income taxes and cost of capital: A correction. American Economic Review, 53(3), 433-443.

Myers, S.C., Majluf, N.S. (1984), Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics, 13(2), 187-221.

Obeidat, M.I. (2021), The validity of Modigliani-Miller theory at the commercial banking industry of Jordan. WSEAS Transactions on Business and Economics, 18, 929-940.

Osman, C.H., Purwanto. (2022), Improving of Financial Flexibility and Distress on Consumer Goods Manufacturers in Indonesia. Working Paper, International Conference on Industrial Engineering and Operations Management, Istanbul, Turkey.

Sayyad, K.P., Ulvenas, J.A. (2012), Examining the Sources of Financial Flexibility: A Study of Firms Listed In Sweden. Master Thesis, School of Economics and Management, Lund University. Available from: https://www.lunduniversity.lu.se/lup/publication/2544425

Serghiescu, L., Văidean, V.L. (2014), Determinant factors of the capital structure of a firm - an empirical analysis. Procedia Economics and Finance, 15, 1447-1457.

Wang, Y., Jiang, L. (2023), Financial Flexibility and Its Potential Contributing Factors. Available from: file:///c:/users/hp/downloads/125981229.pdf

Yemi, A.E., Seriki, A.I. (2018), Retained earnings and firms' market value: Nigeria experience. The Business and Management Review, 9(3), 482-496.

Zhang, H., Zhang, Z., Steklova, E. (2020), Do companies need financial flexibility for sustainable development? Sustainability, 12(5), 1811.

Zhao, H., Zhang, D.Z. (2010), Research on the original attributes of corporate financial flexibility. Accounting Research, 6, (62)-69-96.