

# Internal Financial Factors and their Impact on Strategic Financial Performance in the presence of DFPP's

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## Abstract

This study test the impact of internal financial factors (capital adequacy,recruitment of deposits, and operational efficiency) andthe distinguishing financial performance factors (DFPP's)on strategic financial performance represented by the market value addedjointly and separately. To test the hypotheses of the study data has been collected for the variables through the annual financial reports of the Central Bank of Jordan and the annual financial statements of commercial banks (sample of nine banks) for the period (2005-2012). The results of the study showed a significant effect of moral study combined with variables interpreted (89%) Of the change in market value added.While showed a weak impact of factors (internal financial factors and the factors of financial performance separately). Based on these findings the study came up with a set of recommendations was: importance of Jordanian commercial banks went about using standard market value added as one of the criteria for evaluating the financial performance of banks.

**Keywords:** Internal financial factors, distinguish financial performance factors (DFPP's), Strategicfinancial performance, Panel regression.

## 1. Introduction

Jordan's banking sector has witnessed many developments in recent decades, and shows this through policies and actions taken by the Central Bank to strengthen banking supervision and development of the activities of banks in order to contribute with the development of the capital market. These actions were aimed at the banking environment to improve their performance and to enhance their competitiveness domestically and abroad, and to meet the many challenges posed by technological developments and informatics as well as imposed by the new world order of events and variables, which have led to the emergence of severe global competition. So the banking system's performance has become a strategic issue aimed to strengthening the effectiveness and resilience of the financial system as a whole, especially in the financial and economic shocks.

The financial analysis is one of the functions of financial management that figured prominently in most major business along with the functions of marketing and human resources management, production management and operations. There are two schools in the process of financial analysis, first school is the traditional school and the process of financial analysis an assessment of the financial performance of the company to identify the strengths and weaknesses of this performance and then

develop solutions to address vulnerabilities and to support and promote the strengths. This process relies on a set of criteria or benchmarks that can be used to identify the nature of the financial performance of the business and which reflects the outcome of performance and other departments and these standards are the standards: profitability or liquidity, cost standards, standards for debt or asset management, and market standards. This vision is applied to the inside only, where the internal activities of the company are the sole concern of the financial analysis process.

In the light of the above, the current study sought to measure the impact of internal financial factors and strategic financial performance in the presence of distinguishing factors of the financial performance of a sample of commercial banks in Jordan. Therefore, the primary objective is to find a specific quantitative measure depends on financial factors to determine strategic financial performance.

## 2. Literature Review

The financial ratio can be defined as a relationship between a two individual quantitative financial information connected with each other in some logical manner, and this connection, is considered as a meaningful financial indicator which can be used by the different financial information users.

Any financial ratio/s might be useful and meaningful if we compare it with other related meaningful information, either a present or past similar indicator/s for the same firm or similar firms in the same industry. Although financial ratios are considered useful and practical in financial analysis, these financial ratios should be interpreted and analyzed in a rational manner with caution taken into consideration the limitations of these financial ratios in order to get the expected meaningful result from it. There are many financial ratios used by accountants and financial analysts, and most of these financial ratios can be classified as follows according to their use in financial analysis (Kabajeh, Majed & et.al, 2012):

1. Profitability Ratios
2. Liquidity Ratios
3. Activity (operational) Ratios
4. Debt Ratios
5. Market Ratio

Most studies divide the determinants of commercial banks performance into two categories, namely internal and external factors. Internal determinants of profitability, which are within the control of bank management, can be broadly classified into two categories, i.e. financial statement variables and nonfinancial statement variables. While financial statement variables relate to the decisions which directly involve items in the balance sheet and income statement; non-financial statement variables involve factors that have no direct relation to the financial statements. The examples of non-financial variables within this category are number of branches, status of the branch (e.g. limited or full-service branch, unit branch or multiple branches), location and size of the bank, Number of branches (Haron&Sudin, 2004). External factors are those factors that are considered to be beyond the control of the management of a bank. Among the widely discussed external variables are competition, regulation, concentration, and market share, and ownership, scarcity of capital, money supply, inflation and size (Haron, Sudin, 2004).

Basically, the criteria related to determine companies value and managers performance can be divided into two categories: (i) Traditional financial performance measures (Accounting measures), and (ii) Value based financial performance measures (Economic measures). In the accounting model, firm value is a function of various criteria such as profit, earning per share (EPS), rate of profit growth, return on equity (ROE), return on assets (ROA), dividend per share (DPS), book value (BV), operational cash flow (OCF), return on sales (ROS), and shares of supply and demand. In the value based model, firm value is a function of power of assets profitability, potential investors, and different between rate of return and weighted average cost of capital (WACC) (Jahankhani&Zariffard, 1995).

Most of the value based measures involve; economic value added (EVA), refined economic value added (REVA), market value added (MVA); cash value added (CVA), and free cash flow (FCF) (Pouyanfar, Rezaee, & Safabakhsh, 2010).

In assessing the company performance based on accounting measures, only the profit or net income is considered. These measures are not adequate, because they do not consider the cost of capital. One of the newest value based criteria is economic value added (EVA). Based on this criterion, the value of company depends on the yield and cost of capital employed. Hence, the difference between economic value added and accounting performance measures lays on the fact that in its determination efforts are made to consider the expenses of all financial resources (Lovata & Costigan, 2002).

The experiential studies emphasize that there is no single accounting criteria which illustrate the changeability in the stockholders wealth (Chen & Dodd, 1997). Each financial criterion that use for evaluation of company performance must be very connected with stockholders wealth. Accounting performance measures such as net profit (NP), net operational profit after tax (NOPAT), earning per shares (EPS), return on investment (ROI), return on equity (ROE), and so on, have been criticized because their incapability to shape into a corporation full cost of capital, thus accounting income is not a consistent predictor of firm value and cannot be used for measuring corporate performance. Value based management system has gained popularity in academic literature in last two decades (Sharma & Kumar 2012).

Khrawish & et.al (2011) have investigated "The Determinants of Islamic Bank Profitability: evidence from Jordan". This study comes to examine and analyse the factors that might affect on the Jordanian Islamic bank profitability during the period from 2005 through 2009 by using Multiple Linear Regression Model. The analysis revealed that there are significant and positive relationship between Return on Assets (ROA) and Provision for Credit Facilities + Interest in Suspense / Credit Facilities (PRFCFI/CF), Total Equity / total Assets (TE/TA) and total income / Total Asset (TI/TA) of the Islamic Banking, and there are significant and negative relationship between ROA and the Bank size (Log TA), Total liabilities / Total Assets (TL/ TA) Annual Growth Rate for Gross domestic product (GDPGR), Inflation Rate (INF) and Exchange Rate (ERS) of the Islamic Banking. Also this study found that there are significant and positive relationship between Return on equity (ROE) and Log TA, TL/ TA, TI/TA and ERS of the Islamic Banking, and there are significant and negative relationship between ROE and PRFCFI/CF, TL/ TA, GDPGR and INF of the Islamic Banking.

Stewart (1991) first provided evidence of the correlation between EVA and market value added (MVA). Lehn & Makhija (1997) analyzed the correlation degree between various performance measures and share market returns. The consequence point out that there are most highly associated between EVA and share market returns and this correlation was slightly better than with traditional performance measures such as ROA, ROE and ROS.

De Wet (2005) investigated the relationship between EVA and traditional accounting measures with MVA. The study rooted on the data of firms listed on the JSE South Africa from 1994-2004. The results demonstrated strongest association between MVA and operational cash flow. The standardized relationship between MVA and OCF, ROA, and EVA is 38%, 15%, and 8% respectively. The study also found very little relationship between EPS and DPS with MVA. Yaghoob-nejad & Akkaf (2007) studied the relationship between EVA, residual income (RI), ROS, and return on investment (ROI) with MVA. Their finding exhibited there are meaningful relationship between EVA, RI, ROS, and ROI with MVA.

Paula & Elena (2009) examined the association between EVA, EPS, OCF, and DPS with Market value added (MVA) during the period of 1994 to 2004. The results showed there are stronger relationship between MVA and operational cash flows (OCF) but EVA did not show the strongest association with MVA. The results also revealed very little relationship between MVA and EPS, or between MVA and DPS.

Sharma and Kumar (2012) examined whether EVA can be employed as a tool of performance measures while investing in Indian market and give confirmation about its dominance as a financial performance measure as compared to traditional performance measures (EPS, ROE, ROA, OCF, NOPAT, NI, and RI) in Indian companies. To test the hypotheses and to know the efficacy of various performance measures Panel data regression was used. The results exhibited that EVA is significant connection with MVA and there is positive relationship between EVA and MVA of Indian firms. Furthermore, the results indicated that EPS and RI dominate than EVA in explanation the MVA. They suggest that investor should employ EVA together with traditional measures in evaluation of company and making investment strategy.

### 3. Metodology

#### 3.1 Hypotheses

Based on the previous literature review, it's noted that some of the previous studies found some relationship between the market market value added with some financial ratios, especially (AL Khalayleh, 2001) study which informed a significant positive relationship between the market value added with the ratios of return on assets and return on equity for a sample of Jordanian public companies listed on Amman Security Exchange. According to that, the following hypotheses can be formulated:

**H1:** There is a significant statistical relationship between the internal financial factors (capital adequacy, recruitment of deposits, and operational efficiency) with Jordanian commercial banks market value added.

**H2:** There is a significant statistical relationship between the distinguishing financial performance factors, with Jordanian commercial banks market value added.

**H3:** There is a significant statistical relationship between the internal financial factors (capital adequacy, recruitment of deposits, and operational efficiency) and the distinguishing financial performance Factors (together), with Jordanian commercial banks market value added.

#### 3.2 The Study Models

$$MVA = a + b_1CA_{it} + b_2LTD_{it} + b_3OE_{it} + e_{it} \quad (1)$$

$$MVA = a + b_1EPS_{it} + b_2DPS_{it} + b_3P/BV_{it} + b_4TI/TA_{it} + b_5NICI/TI_{it} + b_6Q_{it} + e_{it} \quad (2)$$

$$MVA = a + b_1CA_{it} + b_2LTD_{it} + b_3OE_{it} + b_4EPS_{it} + b_5DPS_{it} + b_6P/BV_{it} + b_7TI/TA_{it} + b_8NICI/TI_{it} + b_9Q_{it} + e_{it} \quad (3)$$

Where:

**MVA** = Market value added

**a** = Constant

**CA** = Capital Adequacy ratio

**LTD** = loans / deposits ratio

**OE** = Operational efficiency ratio

**Eps** = Earnings per share ratio

**DPS** = Dividend per share ratio

**P/BV** = Price to Book value ratio

**TI/TA** = Total Income to Total Assets ratio

**NICI/ TI** = Net Interest and Commissions Income / Total Income

**Q** = Quick ratio

**b(1-9)** = Coefficients of the variables

**e<sub>it</sub>** = Residuals

### 3.3 Population and Sample

Dominant commercial banks of Jordan were selected as a sample of study, which it accounts for 69.23% of the study population (number of commercial banks working in Jordan was 13 banks in 2012), and 34.61% out the total banks operating in Jordan. The number of the selected banks should not be considered as a shortcoming of the study since its title focused on just Jordanian commercial banks.

## 4. Statistical Analysis and Hypothesis Testing

### 4.1 Factor Analysis

For the purposes of determining performance factors with the most influence on the strategic performance of Jordanian commercial banks, we have been drawing (22) ratios (profitability ratios, liquidity ratios, debt ratios, solvency ratios and market ratios) as indicators of strategic financial performance. Where the test analysis employed to determine the ratios most closely associated with strategic performance represented by the market value added. Table No. (1) Shows the correlation values between these ratios and market value added. As it shows that there are six ratios are statistically related to the MVA at a level of significance of 1% (earning per share, dividends per share, price to book value, total income to assets, net interest and commissions income/ total income, and quick ratio).

**Table 1:** Factor Analysis results

Ratio	Corroletion %	T. Satestic	P- Value
Earning per share	0.7433	6.667	0.0000
Dividends per share	0.7965	7.904	0.0000
Price to book value	0.5755	4.222	0.0002
Total income to assets	0.5591	4.046	0.0003
Net interest and commissions income to total income	0.5851	-4.328	0.0001
Quick ratio	0.6350	4.932	0.0000

### 4.2 Normality Test

Normality tests are used to determine if the data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed. For this purpose Kolmogorov–Smirnov test (K–S test) was used.

**Table 2:** Normality tests

Factor		Normality Test			
		Normal Distribution Test			
		Jarque-Bera		Skewness	Kurtosis
		J-B Test	P-value		
Market Value Added	MVA	3577.297	0.000000	5.213099	35.92000
Adecuacy Ratio	Q2	18.51099	0.000096	1.145960	3.957829
Requirement of deposits ratio	Q3	5.688468	0.058179	0.657931	3.405788
Operational Efficiency	Q4	13.21953	0.001347	0.908617	4.050795
Earning per share	Q9	40.57622	0.000000	1.383619	5.422354
Dividends per share	Q10	3.743316	0.153868	0.184462	1.945644
Price to book value	Q14	131.6819	0.000000	1.877439	8.458466
Total income to assets	Q20	7.441097	0.024221	0.460750	4.277185
Net Interest and Commissions Income to Total Income	Q17	62.65979	0.000000	-1.42649	6.570374
Quick Ratio	Q28	0.493094	0.781494	0.089457	2.636194

### 4.3 Multicollinearity Test

Multicollinearity was conducted between the variables of the study through a correlation matrix (Pearson). The results indicate that there is no problem between most of the independent variables. Where correlation did not exceed 60% between the independent variables, while it's greater than 60% between total income to assets and net interest & commission's income/ total income (0.6387), and between earning per share and both of dividends per share and price to book value (0.614, 0.729).

### 4.4 Data Stationary

Stability data were tested for the study variables through the unit root testing, using test Levin-Lin-Cho (LLC). The test results indicated the lack of root unit problem, which means that the time-series data used in the study are stable over time, and all the test results have shown stability data for all variables used in the study (Level, First difference), where probability values (P-Value) for variables did not exceed 5%. Therefore the data are stable at a level and the first difference. The following table shows the test results for stable data.

**Table 3:** Stationary Test

Variables	Level			First Difference		
		P-Value	Result		P-Value	Result
Market Value Added	-3.57195	0.0002	Stable	-8.12023	0.0000	Stable
Adequacy Ratio	-3.61632	0.0001	Stable	-10.3099	0.0000	Stable
Deposits employment ratio	-0.09072	0.0039	Stable	-6.26008	0.0000	Stable
Operational Efficiency	-0.32851	0.0073	Stable	-6.78764	0.0000	Stable
Earning per share	-1.76024	0.0392	Stable	-6.61488	0.0000	Stable
Dividends per share	-0.61256	0.0027	Stable	-10.4113	0.0000	Stable
Price to book value	-7.11529	0.0000	Stable	-4.09787	0.0000	Stable
Total income to assets	-2.29013	0.0110	Stable	-14.5136	0.0000	Stable
Net Interest and Commissions Income/Total Income	1.58568	0.0096	Stable	-6.20766	0.0000	Stable
Quick Ratio	-4.63973	0.0000	Stable	-6.50663	0.0000	Stable

### 4.5 Fixed and Random Effect

For the purposes of the adoption of fixed or random effect to test the hypotheses of the study, it has been testing Hausmann (Hausman Test) for each hypothesis of the study hypotheses to choose the most appropriate test as shown in table (4). The random effect was rejected in favour of fixed effect if the probabilistic value (P-Value) since the chi-squared test ( $Q^2$ ) of less than 5%.

**Table 4:** Fixed and Random Effect Test

Assumptions	Cross-section Chi-square	P-Value	The Effect
First Assumption	29.922901	0.0002	Fixed Effect
Second Assumption	33.871436	0.0000	Fixed Effect
Third Assumption	22.963405	0.0024	Fixed Effect

## 5. Results

### 5.1 The First Hypothesis Test Results

The above model has been estimated by means of panel data for the selected companies in the stock exchange in order to test research variables. Obtained results of this estimation are summarized in table (5). Given to statistic (f) and the significance level corresponding with coefficients of each one of the variables it can infer that the relationship among market value added and internal financial factors is significant at a level lower than 5%. It means that by increasing one percent in Recruitment of deposit of the market value added is increased equal to 12.48 units and this variable has had a positive and

significant impact. By increasing one percent in Operacionaleffecioncy value of the market value added is increasing about 0.287812. And By one percent change in Capital Adequacyvalue of the market value added is increased equal to 0.161426 but there is no significant relationship between in Capital Adequacy and market value added.

**Table 5:** first hypothesis test results

The Independent Variable: MVA		Fixed Effect	
Variables	Coefficient	T-Test	P-Value
C	-64.97671	-3.815253	0.0003
Capital Adequacy	0.161426	1.365433	0.1772
Recruitment of deposit	12.47977	3.302731	0.0016
Operacionaleffecioncy	0.287812	3.311813	0.0016
R <sup>2</sup>	0.36661	D.W test	1.141416
F- Test	3.157824	Probability (F)	0.002004

## 5.2 The Second Hypothesis Test Results

The distinguishing financial performance factors (DFPF's) as a control variables entered into the model to check its impact on the strategic financial performance of Jordanian commercial banks represented by market value added. There are many studies that have dealt with these variables as independent variables (Dong&Su, 2010), and it has been studied the impact on the market value added along with these factors. Table No.(6) alartiat test results and multiple regression for the second hypothesis, and it is clear that the value of Durbin-Waston had referred to the absence of subjective artiat (Autocorrelation) between errors in the regression equation (1.34) which is within the acceptable limits of this test. Accordingly, it follows that F test results (with F=22.92 and significance level 5% with P-Value (0.000)) indicate rejection of the null hypothesis H<sub>02</sub>, and accept the alternative hypothesis H<sub>12</sub>: There is a significant statistical relationship between the distinguishing financial performance factors, with Jordanian commercial banks market value added. Note also that the value of the correlation coefficient is 80% which it interpreted the change in the market value added of 80%, which is high compared with the relation between the internal financial factors and market value added which were about 37% only.

**Table 6:** Second hypothesis test results

The Independent Variable: MVA		Fixed Effect	
Variables	Coefficient	T-Test	P-Value
C	-27.08164	-3.067504	0.0033
Earning per share	22.77671	3.383192	0.0013
Dividends per share	3.697954	-2.007704	0.0494
Price to book value	5.280270	9.553571	0.0000
Net interest and commission income to total income	0.157895	2.407244	0.0193
Total income to assets	-0.981950	-2.641113	0.0106
Quick Ratio	-4.007742	-2.460207	0.0169
R <sup>2</sup>	0.807499	D.W test	1.345824
F- Test	22.27345	Probability (F)	0.000000

## 5.3 The Third Hypothesis Test Results

Table (7) shows also, the DW statistic is substantantially(DW= 1.38) it means there is evidence of positive serial correlation. As a rough rule of thumb, if DW is less than one, there may be cause for alarm. Therefore, the test results of (F- test) refers to the rejection of the hypothesis of H<sub>03</sub>, and accept the alternative hypothesis H<sub>13</sub>, and that there is a statistically significant impact of internal(capital adequacy, the employment rate for deposits, and operational efficiency) and DFPF's together on MVA, where the calculated F value is equal to (17.55), a moral significance level 5% with P-Value (0.000).

And that the effect of the independent variables taken together with the force of an explanatory variable of high market value added, amounting to the value of the coefficient of determination  $R^2$  (79%). they explained a 79% of the change in market value added, which is a very good explanation.

**Table 7:** Third hypothesis test results

The Independent Variable: MVA		Fixed Effect	
Variables	Coefficient	T-Test	P-Value
C	-23.46809	-2.206181	0.0316
Capital Adequacy	0.021996	0.235250	0.8149
Recruitment of deposit	-1.750590	-1.083728	0.2833
Operacionalefficiency	0.033181	0.596515	0.5533
Earning per share	23.90084	4.027165	0.0002
Dividends per share	-1.158697	-1.790423	0.0790
Price to book value	5.161653	7.507377	0.0000
Net interest and commission income to total income	0.170634	2.747837	0.0081
Total income to assets	-0.906311	-2.263276	0.0277
Quick Ratio	-4.065206	-2.673981	0.0099
$R^2$	0.798583	D.W test	1.383720
F- Test	17.55893	Probability (F)	0.000000

## 6. Summary and Concluding Remarks

The importance of this study stems from the importance of the Jordanian commercial banking sector which has a huge share in the Jordanian economy. In addition, this study is anticipated to make contributions in the management in the field of banking, throw helping decision makers to pay more attention on the major banking activities that may help in increasing the strategic financial performance positions and ranking of the bank as compared to other banks. In addition, the financial information of this study will help the management of the commercial banks of Jordan in setting up plans and financial strategies.

This study investigates the impact of internal financial factors (capital adequacy, recruitment of deposits, and operational efficiency) and the distinguishing financial performance factors (DFPF's) on strategic financial performance represented by the market value added jointly and separately for the period (2005-2012). The results of the study showed a significant effect of moral study combined with variables interpreted (89%) of the changes in market value added. While showed a weak impact of factors (internal financial factors and the factors of financial performance separately).Based on these findings the study came up with a set of recommendations was: importance of Jordanian commercial banks went about using standard market value added as one of the criteria for evaluating the financial performance of banks.

This study can be a source of help to bank managers to improve their financial performance and formulate policies that will promote effective financial system. The study also recommends measures that could be adopted by banks to ensure soundness in their operations. Each Jordanian bank should do a thorough study of internal financial factors and distinguishing factors of financial performance to reach a particular slope equation to determine the strengths and weaknesses and can predict the desired strategic financial performance represented in MVA.

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