

Impact of Inflation on Stock Returns in Banks and Financial Services Sector in Saudi Stock Exchange

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Abstract: This research aim to study the effect of inflation on stock returns in banks and financial services sector in Saudi Stock Exchange. The inflation is a macro variable which is taken under consideration, it is considered as a very important for the economy of any change among this variable affect the economy in various ways and the regulatory authority to take steps in order to make changes in their policies which can affect the economy in a positive way. Eleven years from (2003- 2013) is taken in consideration. Regression model is applied to the data and the result shows that there is a relationship among the independent variable (Inflation) and dependent variable (Stock Returns).

Key Words: Banks and Financial Services Sector, Inflation, Stock returns.

أثر التضخم على عوائد الأسهم في قطاع المصارف والخدمات المالية بالسوق المالية السعودية

محمد فيصل حسن

المخلص: شهدت أسواق رأس المال تطورا كبيرا في القرن الأخير، وازدادت أهميتها في الحياة الاقتصادية في البلدان المتطورة والنامية على حد سواء. لكن هناك العديد من المتغيرات الاقتصادية التي تؤثر على أداء سوق الأوراق المالية، وبالتالي على قيمة هذه الشركات، يعد التضخم من أهم هذه المتغيرات. هدفت هذه الدراسة لمعرفة تأثير التضخم على عوائد الأسهم في قطاع المصارف والخدمات المالية في السوق المالية السعودية، بغية الإلمام والإحاطة بمختلف جوانب الموضوع وتحليل أبعاده والإجابة عن الإشكالية المطروحة في هذه الدراسة، عند التحقيق في أثر التضخم على توزيعات الأسهم بالشركات المدرجة بالسوق المالية السعودية اتبعت الدراسة منهجية التحليل الكمي حيث تم استخدام تحليل الارتباط الخطي لاختبار الفرضيات. التضخم متغير كلي يؤخذ بالاعتبار لتأثيره على الاقتصاد بطرق مختلفة، سعت الدراسة لمعرفة مدى تأثير التضخم على عوائد الأسهم والقرارات المتعلقة بها. غطت الدراسة الفترة من (2003- 2013). تبين أن هناك علاقة خطية بين المتغير المستقل (التضخم) والمتغير التابع (عائدات الأوراق المالية)، وأن التضخم يؤثر بشكل كبير على عوائد الأسهم في قطاع المصارف والخدمات المالية بالسوق المالية السعودية.

الكلمات الرئيسية: البنوك وقطاع الخدمات المالية، التضخم، عوائد الأسهم.

1. Introduction:

Stock market, especially in small economies, plays a very vital role in mobilizing economic resources within and from outside the economy to achieve greater and better economic potentials. Higher stock returns imply higher profitability by firms and other corporate bodies and thus overall growth/prosperity of an economy and vice versa. Therefore macroeconomic variables affect the performance of the stock market positively or negatively.

A rapid increase in inflation also affects negatively the performance of the stock market. Growing inflation considered as a bad news by the investors because it depicts bad economic conditions in the country and investors feel insecure about their investment in the stock market. Actions of monetary authorities have a significant impact on stock prices and fluctuation of interest rate signals good or bad information to investors (Lobo, 2000).

Saudi Arabia has one stock exchange, the Tadawul, whose financial markets are regulated by the Capital Market Authority (Saudi Arabia). The stock market capitalization of listed companies in Saudi Arabia was valued at \$646 billion in 2005 by the World Bank (worldbank.org/).

In the summer of 2008. Saudi inflation reached a 9.9 percent, driven largely by a dizzying rise in global food prices. During the recession the following year, rates moderated to more benign levels, but a recent report that inflation have reached an annualized rate of 6.1 percent has raised the specter of a return to double-digit inflation (International Monetary Fund, 2012)

The prospect of a return to higher inflation in Saudi Arabia is indeed troubling. Yet what is worrying about the recent inflation reports is not that it portends a probable return to double-digit inflation-in fact this is unlikely. Rather, it is another data point along a long-term trend line that demonstrates that Saudi Arabia may have reached a structurally higher level of inflation.

There are many macroeconomic variables affecting the performance of the financial markets. Inflation is very important among these variables. Investors do consider these variables while making decisions about their investments. Central Bank increases target fund rate to control the money supply (inflation) which affects to businesses. To test the impact of this variable empirically, inflation is selected as independent variable and stock return is dependent variable.

Objective of the Study:

The objective of the study is to investigate the impact of inflation on stock returns of Banks and Financial Services Sector in Saudi Stock Exchange.

Hypotheses

- A) Inflation affects stock returns negatively
- B) It is possible to develop a model to express the negative effect of inflation on stock returns.

Methodology:

In this study, we are investigating the impact of inflation on stock returns of Banks and Financial Services Sector in Saudi Stock Exchange. and in this study multiple regressions are used to test the hypothesis. Inflation is independent variable and stock returns are dependent variable. For inflation CPI is used. The annual data from 2003 to 2013 is selected for the analysis.

Significance, Scope and Limitations of the Study

The performance of the stock market is very important to investors and they react to macroeconomic variables which may affect the performance of the stock market. Inflation is the key macroeconomic variable which affect the market. Which will help in their decision-making. For this purpose annual data from 1st January, 2003 to December 31th 2013 is selected. Stock returns will be calculated by calculating the change of Banks and Financial Services Sector in Saudi Stock Exchange points.

2. Previous studies

There is a lot of literature that analyze the relationship among inflation and stock returns.

Mundell (1963), Blanchard (1981), Kaul (1987), Lobo (2000), Rasheed (2002), Aydemir & Demirhan (2009), Khrawish, Siam & Jarada (2010), Rano & Bayero(2010) and Arouri et al (2014) confirm the relationship among inflation and stock returns.

Mundell (1963) investigated inflation and interest rate mechanism. He stated that the anticipated inflation causes a rise in the money rate of interest. Interest rate slightly fluctuates because of the unstable cost of living. That is because interest rates rise when prices starts to increase, but never that much high as it should be. It was assumed in the study that the real profits can be capitalized at the real interest rate .Inflation causes a difference between money interest rate and real interest rate and this difference causes a gap between nominal earnings and money earnings.

Blanchard (1981) study aim interest rate, exchange rate and inflation have some influence on the performance of the stock market .described the relationship of output, stock market and interest rates. He stated that higher stock money lowers interest rate which means lower cost of capital and in turn causes better stock market value. He summarized that change in the policy causes changes in the stock market because of real interest rate and anticipated profits. The announcement of a policy leads to change in profits and discount rates, which in turn affect the performance of the stock market .He concluded that the flexible policies affect the nominal money, which leads to changes in the stock market.

Kaul (1987) stated that there is an inverse relationship among stock returns and expected inflation and positive relationship among stock returns and real activity. He tests the hypothesis of that negative relationship by selecting data from 1926 through 1940. He summarized that this inverse relationship can be explained by understanding the equilibrium process in monetary sector depending on money demand and supply influence.

Empirically tested the sensitivity of bank stock returns to market, interest rates and exchange rate risks. They covered stocks of 48 US banks for the period of 1975 through 1987 and they found that exchange rate significantly negativity related to US bank stock returns.

Lobo (2000) studied the effect of interest rate changes in stock prices. He examined the behavior of stock prices after Federal fund rate announcements and he found that before announcements of increase in the Federal fund rate the asymmetry in price adjustments gets narrow. He also found that stock market response quicker to the news of overpricing than news of a depressing .He finally concluded that target rate announcement has significant impact on stock prices and convey new information to the stock market. Inflation is very important among these macroeconomic variables which affect the performance of the stock market. Actions of monetary authorities have a

significant impact on stock prices and fluctuation of interest rate signals good or bad information to investors.

Rasheed (2002) conducted a study for South Asian countries i.e. Pakistan, India, Bangladesh and Sri Lanka, to find the impact of exchange rates on the stock returns. The study examines this relation for all the countries in long and short run fluctuations in exchange rates. The study used a monthly data for six years. The study found no relation for both long and short run between stock returns and exchange rates in India and Pakistan, also the same results were found in Bangladesh and Sri Lanka. As there is a lack of relation between returns and exchange rates, there is no need of using information regarding taking advantage of stock return due to fluctuation in exchange rate from one market to predict behavior in the other market. The study made recommendations for further research in this particular area by using weekly or even daily information in order to find more concrete evidence about stock returns and fluctuations in exchange rates.

Aydemir & Demirhan (2009) in their study analyzed the impact of macroeconomic variables on the stock market of Turkey. The data from the periods of 2001 to 2008 was selected to analyze. They described the traditional approach which based on the concept that the stock market leads exchange rate movements. The augmented dickey fuller test of their study indicated that the data was integrated order one and the causality test confirmed bidirectional causality between exchange rate and the stock prices of Turkey stock exchange. The results of the study indicated positive causality among exchange rate and technology indices.

Khrawish, Siam & Jaradat (2010) in their study examined the market capitalization rate and interest rate for the market of Jordan named Amman Stock Exchange. Both variations are important to affect the country's economy. To examine the relationship sample from 1990 to 2008 was selected and the OLS regression method was applied to test the hypothesis. The results of the study demonstrated a significant positive relationship and the first hypothesis (A) of a negative relationship between interest rate and the market capitalization rate was rejected. They also found that there was a positive relationship between market development rate and market capitalization rate, so the B was rejected. They finally concluded that the government plays an important role to intervene in the financial market of the Jordan.

Rano & Bayero (2010) studied volatility of stock returns and the impact of inflation. The applied Generalized Heteroscedasticity Model to investigate the relationship for the market of Nigeria and Ghana. Test of the normality of data, descriptive statistics indicated average stock returns were positive, but more volatile for the markets of Nigeria and Ghana. It was found from the model's returns that the volatility for Nigeria's market were significant but insignificant for the market in Ghana. Market volatility was affected by inflation in both of the countries. A decrease in inflation caused an increase in market volatility, but it was insignificant in the market of Ghana.

Arouri et al (2014) the nexus between stock return and inflation is assessed for Pakistan using the methodology of frequency based causality over a long period. the study finds stock returns and inflation to be in the phase (positively related) when consumers' price inflation is considered and independent when producers' price inflation is utilized.

Overall results based on both the inflation measures indicate that, inflation does not erode the value of stocks in Pakistan and stocks could be used as hedge against inflation at least in the long-run.

3. RESEARCH METHODOLOGY

This part includes a model explains the relationship between inflation as an independent variable and earnings Stock Returns as the dependent variable, and analysis of data using the correlation coefficient for the interpretation of the form.

Multiple Regression Model

The study will employ linear regression analysis to test the hypotheses:

A) Inflation affects stock returns negatively

B) It is possible to develop a model to express the negative effect of inflation on stock returns.

The linear regression model is:

$$Sr = \alpha + \beta \text{ Inf}$$

α = constant.

Sr = Stock Returns

β = The value of the dependent variable

Inf = Inflation (CPI is used)

Inflation can be measured by many indicators which are consumer price index, wholesale price index and the service price index. In Saudi Arabia.

Stock returns will be calculated as :

$$Sr = (p_1 - p_0) - Ds/p_0$$

p_1 = Price at the beginning of the period.

p_0 = Price at the end of the period.

DS = Distributions during the period.

Data Description:

- Inflation:

The following rates of inflation in Saudi Arabia during the period (2003-2013).

Table (1) Annual inflation rates in the Kingdom of Saudi Arabia (2003 - 2013)

Year	inflation rate
2003	0.6
2004	0.4
2005	0.6
2006	2.3
2007	4.1
2008	9.9
2009	4.6
2010	4.7
2011	4.6
2012	4.6
2013	3.5

- Return on stocks:

The following account of return on stocks for the banking sector and financial services in the Saudi Stock Exchange.

Table (2) Calculate the return on stocks for the banking sector and financial services (2003 - 2013)

Year	Al Rajhi	Riyad	Saudi British	Alinma	Saudi Fransi	Saudi Hollandi	Saudi Investment	Arab National	AlJazira	ALBILA D	Samba	Banks sector
2003	2.63	0.79	0	1.16	1.05	0.70	0.74	0.84	1.58	0	0	0.89
2004	2.38	1.15	0	1.57	1.69	1.44	1.21	1.47	1.11	0	0	0.42
2005	1.79	0.97	0	1.15	0.95	0	0	0	0	0	0	1.01
2006	0.46	-0.50	0	-0.40	-0.25	-0.36	-0.36	-0.18	-0.36	-0.77	-0.26	-0.35

Year	Al Rajhi	Riyad	Saudi British	Alinma	Saudi Fransi	Saudi Hollandi	Saudi Investment	Arab National	AlJazira	ALBILA D	Samba	Banks sector
2007	0.36	0.55	0	0.31	0.45	0.01	0.08	0.63	0.01	0.01	0.35	0.25
2008	-0.50	-0.56	-0.34	-0.37	-0.58	-0.36	-0.67	-0.59	-0.69	-0.30	-0.56	-0.50
2009	0.28	0.31	0.13	0.04	0.22	-0.04	0.06	0.41	0.30	-0.26	0.01	0.19
2010	0.18	0.02	-0.17	-0.04	0.15	-0.88	0.22	-0.07	-0.14	-0.06	0.22	0.20
2011	-0.13	-0.10	-0.11	0.03	-0.03	0.06	-0.06	-0.01	0.06	0.02	-0.22	0.08
2012	0.03	0.02	0.37	0.01	-0.09	0.16	0.18	0.01	0.53	0.44	-0.01	0.17
2013	0.13	0.30	0.15	0.50	0.21	0.58	0.63	0.19	0.46	0.64	0.14	0.36

Note from the tables (1) and (2) the fluctuation of each of inflation, and stock returns during the period (2003-2013).

4. Data analysis:

This part of the study describes the data analysis and results of the study.

1- Al Rajhi bank:

Table (3) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	7.962	1	7.962	21.745	.001(a)
Residual	3.295	9	.366		
Total	11.257	10			

ANOVA shows that the overall model is significant with F value of 0.001 ($F = 0.001 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 4 shows the accuracy of coefficients.

Table (4) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	1.881	.314		5.999	.000
inflation	-.328	.070	-.841	-4.663	.001
R = -.841			R Square = 0.707		

Table 4 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -3.28 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.707 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 71%.

- The regression model can be configured as follows:

$$Sr = 1.881 - 0.328 \text{ Inf}$$

2- Riyad bank:

Table (5) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	1.761	1	1.761	11.332	.008(a)
Residual	1.398	9	.155		
Total	3.159	10			

ANOVA shows that the overall model is significant with F value of 0.008 ($F = 0.008 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 6 shows the accuracy of coefficients.

Table (6) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.827	.204		4.051	.003
inflation	-.154	.046	-.747	-3.366	.008
R=.747			R Square=.557		

Table 6 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -0.154 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.557 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 56%.

- The regression model can be configured as follows:

$$Sr = 0.827 - 0.154 \text{ Inf}$$

3- Alinma bank:

Table (7) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	.052	1	.052	1.651	.231(a)
Residual	.281	9	.031		
Total	.333	10			

ANOVA shows that the overall model is significant with F value of 0.231 ($F = 0.231 > 0.05$). The result of ANOVA table confirmed that the predicted model is non-significant at 5% significance level. Table 8 shows the accuracy of coefficients.

Table (8) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.098	.092		1.075	.310
inflation	-.026	.021	-.394	-1.285	.231
R =.394			R Square =.155		

Table 8 shows inflation has no impact on stock returns and this result is non-significant because Significance F = 0.231 > 0.05.

- The regression model can be configured as follows:

$$Sr = 0.098 - 0.026 \text{ Inf}$$

4- Saudi British bank:

Table (9) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	2.545	1	2.545	12.662	.006(a)
Residual	1.809	9	.201		
Total	4.355	10			

ANOVA shows that the overall model is significant with F value of 0.006 ($F = 0.006 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 10 shows the accuracy of coefficients.

Table (10) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	1.032	.232		4.444	.002
inflation	-.185	.052	-.765	-3.558	.006
R=.765			R Square =.585		

Table 10 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -0.185 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.585 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 59%.

- The regression model can be configured as follows:

$$Sr = 1.032 - 0.185 \text{ Inf}$$

5- Banque Saudi Fransi:

Table (11) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	2.788	1	2.788	16.652	.003(a)
Residual	1.507	9	.167		
Total	4.294	10			

ANOVA shows that the overall model is significant with F value of 0.003 ($F = 0.003 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 12 shows the accuracy of coefficients.

Table (12) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	1.046	.212		4.935	.001
inflation	-.194	.048	-.806	-4.081	.003
R=.806			R Square =.649		

Table 12 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -0.194 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.649 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 65%.

- The regression model can be configured as follows:

$$Sr = 1.046 - 0.194 \text{ Inf}$$

6- Saudi Hollandi Bank:

Table (13) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	1.189	1	1.189	4.084	.074(a)
Residual	2.620	9	.291		
Total	3.808	10			

ANOVA shows that the overall model is significant with F value of 0.074 ($F = 0.074 > 0.05$). The result of ANOVA table confirmed that the predicted model is non-significant at 5% significance level. Table 14 shows the accuracy of coefficients.

Table (14) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.579	.280		2.070	.068
inflation	-.127	.063	-.559	-2.021	.074
R = .559			R Square = .312		

Table 14 shows inflation has no impact on stock returns but this result is non-significant because Significance F = 0.074 > 0.05.

- The regression model can be configured as follows:

$$Sr = 0.579 - 0.127 \text{ Inf}$$

7- The Saudi Investment Bank:

Table (15) shows. That the F value equal to 7.369 degrees of freedom 1 and 9 and the level of significance of 0.024 a value of less than 0.05 This means that the regression model of a significant.

Table (15) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	1.219	1	1.219	7.369	.024(a)
Residual	1.488	9	.165		
Total	2.707	10			

ANOVA shows that the overall model is significant with F value of 0.0243 ($F = 0.024 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 16 shows the accuracy of coefficients.

Table (16) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.650	.211		3.084	.013
inflation	-.128	.047	-.671	-2.715	.024
R = .671			R Square = .450		

Table 16 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -0.128 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.450 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 45%.

- The regression model can be configured as follows:

$$Sr = 0.650 - 0.128 \text{ Inf}$$

8- Arab National Bank:

Table (17) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	1.391	1	1.391	6.958	.027(a)
Residual	1.799	9	.200		
Total	3.190	10			

ANOVA shows that the overall model is significant with F value of 0.027 ($F = 0.027 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 18 shows the accuracy of coefficients.

Table (18) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.743	.232		3.205	.011
inflation	-.137	.052	-.660	-2.638	.027
R =.660			R Square =.436		

Table 18 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -0.137 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.436 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 44%.

- The regression model can be configured as follows:

$$Sr = 0.743 - 0.137 \text{ Inf}$$

9- Bank AlJazira::

Table (19) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	1.802	1	1.802	6.773	.029(a)
Residual	2.394	9	.266		
Total	4.196	10			

ANOVA shows that the overall model is significant with F value of 0.029 ($F = 0.029 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 20 shows the accuracy of coefficients.

Table (20) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.826	.267		3.089	.013
inflation	-.156	.060	-.655	-2.603	.029
R =.655			R Square =.429		

Table 20 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -0.156 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.429 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 43%.

- The regression model can be configured as follows:

$$Sr = 0.826 - 0.156 \text{ Inf}$$

10- BANK ALBILAD:

Table (21) shows. That the F value equal to 0.059 degrees of freedom 1 and 9 and the level of significance of 0.814 a value of more than 0.05 This means that the regression model of a non-significant.

Table (21) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	.009	1	.009	.059	.814(a)
Residual	1.342	9	.149		
Total	1.351	10			

ANOVA shows that the overall model is significant with F value of 0.814 ($F = 0.814 > 0.05$). The result of ANOVA table confirmed that the predicted model is non-significant at 5% significance level. Table 22 shows the accuracy of coefficients.

Table (22) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.014	.200		.070	.946
inflation	-.011	.045	-.081	-.243	.814
R = .081			R Square = .006		

Table 22 shows inflation has no impact on stock returns but this result is non-significant because Significance F = 0.814 > 0.05.

- The regression model can be configured as follows:

$$Sr = 0.014 - 0.011 \text{ Inf.}$$

11-Samba Financial Group:

Table (23) ANOVA

	Sum of Squares	df	Mean Square	F	Significance F
Regression	.121	1	.121	2.233	.169(a)
Residual	.489	9	.054		
Total	.610	10			

ANOVA shows that the overall model is significant with F value of 0.169 ($F = 0.169 > 0.05$). The result of ANOVA table confirmed that the predicted model is non-significant at 5% significance level. Table 24 shows the accuracy of coefficients.

Table (24) Estimates of model

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.117	.121		.967	.359
inflation	-.040	.027	-.446	-1.494	.169
R = .446			R Square = .199		

Table 24 shows inflation has no impact on stock returns but this result is non-significant because Significance F = 0.169 > 0.05.

- The regression model can be configured as follows:

$$Sr = 0.117 - 0.040 \text{ Inf.}$$

12 - Banks & Financial Services Sector:

Table (25) shows the analysis of variance of the model:

	Sum of Squares	df	Mean Square	F	Significance F
Regression	1.354	1	1.354	15.074	.004(a)
Residual	.808	9	.090		
Total	2.162	10			

ANOVA shows that the overall model is significant with F value of 0.004 ($F = 0.004 < 0.05$). The result of ANOVA table confirmed that the predicted model is significant at 5% significance level. Table 26 shows the accuracy of coefficients.

Table (26) shows the values of model Coefficients:

	Unstandardized Coefficients		Standardized Coefficients	t	Significance F
	B	Std. Error	Beta		
(Constant)	.710	.155		4.574	.001
inflation	-.135	.035	-.791	-3.882	.004
R = .791			R Square = .626		

Table 26 shows the intercept and the coefficients of the regression model. The coefficient of inflation is -0.135 which shows inflation has impact on stock returns and this result means that the relationship between inflation and stock returns are negatively related. The value of the coefficient of determination (R square) equal to 0.626 and this means that the independent variable (inflation) explains the variance in the dependent variable (stock returns) in ratio 63%.

- The regression model can be configured as follows:

$$Sr = 0.710 - 0.135 \text{ Inf.}$$

- Summary:

The study has been allocated for this part to analyze the relationship between inflation and stock returns in the banking and financial services sector in Saudi Stock Exchange market during the period 2003-2013.

Have shown through the correlation coefficient, the relationship between the two variables is strong overall. And therefore, the impact of inflation on stock returns for each of the Al-Rajhi Bank, Riyad Bank, Saudi British Bank and Banque Saudi Fransi, strong negatively related influence during this period. While the impact of inflation on stock returns for each of the Investment Bank, Arab National Bank and the Bank AlJazira have a strong impact.

The effect of inflation on stock returns for each of the SHB and Samba Financial Group, a moderate impact, while the impact of inflation on stock returns for each of the Alinma Bank and BANK ALBILAD influence is weak.

Results show that the relationship between inflation and stock returns between the banking sector and the financial services market, the financial Arabia is an inverse relationship, and therefore this sector cannot be a protection against the risk of devaluation of the real income resulting from higher rates of inflation.

5. CONCLUSIONS

- Results

This study investigated the impact of inflation on the stock returns banking and financial Services sector. Results of the multiple regressions indicated strong variation in the dependent variable due to independent variable. Inflation has significant impact on stock returns in bank and financial Services sector.

The study concluded to develop a model explains the relationship between inflation and stock returns in the banking and financial services sector. This model explained that the association between the two variables negative correlation. Investors expect lower stock returns when the inflation rate rises.

- Recommendations/Suggestions.

Suggestion for the investors is that they must closely analyze the inflation rate patterns before investing in banking and financial Services sector and based on those forecasted inflations rate they can maximize their profits

The recommendations for the further research are that more variables can be taken in other researches in order to find out the impact of other variables on stock returns.

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