

## **The Impact of Cash Holdings and Economic Factors on the Economic Value Added in the Commercial Banks**

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### **ABSTRACT**

The purpose of this research was to investigate the impact of cash holdings and economic factors on the economic value added in the commercial banks in Jordan. This research employs panel data analysis to updated data using Jordanian commercial banks annual reports and regression analysis to examine the impact. The research found that there is a statistical significant impact of cash holdings on the Economic Value Added. Also, there is a statistical significant impact of Net Interest Margin on the Economic Value Added. Moreover, the research found that there is a statistical significant impact of Real Gross Domestic Product (RGDP) on the Economic Value Added, and there is a statistical significant impact of inflation on the Economic Value Added. Finally, the researcher used the bank size as a control variable to study the impact and the research found that there is a statistical significant impact of cash holdings value and the Real Gross Domestic product (RGDP) on the Economic Value Added under the shallow of the bank size. Also, there is no statistical significant impact of Net Interest Margin (NIM) and inflation on the Economic Value Added in Jordanian commercial banks under the shallow of the bank size.

**Keywords:** The Impact, Cash Holdings, Economic Value Added, Real Gross Domestic Product, Net Interest Margin, inflation, Economic Factors, Bank Size.

### **1. Introduction**

Cash holdings and economic factors receive an increasing attention in the financial literature. The special interest lies in the fact that banks hold significant amounts of cash in their balance sheets. Sola, et al, (2013) indicated that Dittmar and Marth-Smith found the sum of all cash and marketable securities represented more than 13% of the Sum of all assets for large publicly traded US financial firms. That led to some questions such as, what is cash holding? Why do firms hold the cash and how? What is the Economic Value Added? Is there any impact or relationship between the Economic Value Added, cash holdings and the economic factors? How cash holdings and the economic factors affect firm value and performance and how they affect the whole economy? As a result of these questions, understanding cash holdings policy appeared to be an essential element if we want to enrich our knowledge of how firms are financed, and what the real implications of their financing choices are.

Despite the role in firm life, cash holdings have long been left unexplored by finance researchers. However, the finance profession has progressively started to pay a closer attention to firms' cash positions. Two related facts have contributed to place corporate cash holdings under the spotlight. But, what is the important, role and impact of the economic factors on the Economic Value Added? Banks play an important role in transforming savings into investment to create a value added. Therefore, understanding the developments of bank activities and economic factors changing such as Net Interest Margin (NIM), inflation, and Real Gross Domestic Product (RGDP) are important as part of this research. In general, managers have incentives to hold cash and understand the economic factors for two reasons. First, to increase the amount of assets under their control and management. Second, to gain discretionary power, knowledge and awareness over the firm investment decision. On the other hand, the Economic Value Added receives a huge amount of attention. It becomes a viable business practice for many large banks and financial firms during the last few years. In this research, we will try to study and analyze the impact of cash holdings and economic factors on the Economic Value Added in the commercial banks

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in Jordan over the period (2003-2012).

## 2. Research Problem and its Elements

Cash holding, economic factors, and economic value added are so important to all banks and financial firms in making decisions. In some cases, banks do not hold cash because they have specific or particular investments in mind than to finance with the cash. But because they use cash as a strategy, they call it a strategic weapon; they can use it to take advantage of investment opportunities that **could** show up in the future. Of course, the opportunities could never show up as well. But, it would still be important for **banks** to accumulate cash for. In other cases, banks hold huge cash amounts and use the cash during economic and financial crises to buy assets from distressed and large strong firms at bargain prices. It is good to know that the advantage of holding cash becomes a bit smaller in developed markets but certainly it will still exist. The purpose of this research is to study the impact of cash holdings and economic factors on the economic value added in commercial banks and to achieve this purpose; the research will try to answer the following questions:

1- Is there an impact of cash holdings value on the economic value added in Jordanian commercial banks?

2- Is there an impact of economic factors on the economic value added in Jordanian commercial banks?

**2.1** Is there an impact of Net Interest Margin (NIM) on the economic value added in Jordanian commercial banks?

**2.2** Is there an impact of Real Gross Domestic Product (RGDP) on the economic value added in Jordanian commercial banks?

**2.3** Is there an impact of inflation on the economic value added in Jordanian commercial banks?

3- Is there an impact of cash holdings and economic factors on the economic value added in the commercial banks in Jordan, under the shallow of the bank size?

**Research Objectives:** The main objectives of this research are:

**1-** To examine whether there is an impact of Cash holdings on the Economic Value Added in the commercial banks. **2-** Determine whether bank's Economic Value Added affected by any change in the Economic Factors "Net Interest Margin, Real Gross Domestic Product and inflation". **3-** To show the impact and the importance of the bank size as control variable on bank's Economic Value Added.

### Research Importance:

- **Theoretical Importance:** Every business has some

cash on its books and a lot of banks have a huge cash balances, as a percent of their values. The previous literatures showed that there were no general agreements regarding the cash holdings and economic factors benefits. If there is any impact on the economic value added. Therefore, this research comes to clarify whether there is an impact of cash holdings and economic factors on the economic value added in the Jordanian commercial banks. On the other hand, the research will add theoretical information about the cash holdings and the economic factors importance, impact and role in the economy.

- **Practical Importance:** This research represents an attempt to address and study the impact of cash holdings and economic factors on the economic value added in commercial banks in Jordan, a few studies show the impact of cash holdings value, net interest margin, real gross domestic product and inflation on economic value added, so the last represents the aim and the most important element in any financial firm. Therefore, this research will help the managers in making decisions and will increase the awareness of investors, individuals, banks and financial firms about the important of cash holdings and economic factors in the economy.

### Research Hypotheses:

The research will test the following hypotheses:

**Main hypothesis: There is no statistical significant impact at ( $\alpha = 0.05$ ) of Cash Holdings and Economic Factors on the Economic Value Added in the Commercial Banks.**

**Hypothesis 1:** There is no statistical significant impact at ( $\alpha = 0.05$ ) of cash holdings value on the Economic Value Added in commercial banks in Jordan.

**Hypothesis 2:** There is no statistical significant impact at ( $\alpha = 0.05$ ) of economic factors on the Economic Value Added in commercial banks in Jordan.

**Sub-main hypothesis:** There is no statistical significant impact at ( $\alpha = 0.05$ ) of Net Interest Margin (NIM) on the Economic Value Added in commercial banks in Jordan.

**Sub-main hypothesis:** There is no statistical significant impact at ( $\alpha = 0.05$ ) of Real Gross Domestic Product (RGDP) on the Economic Value Added in commercial banks in Jordan.

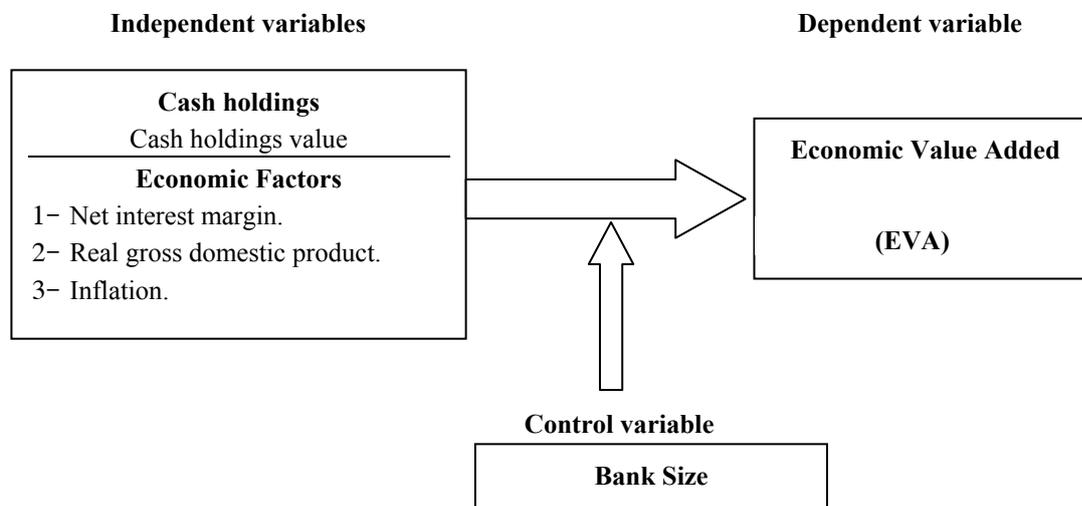
**Sub-main hypothesis:** There is no statistical significant impact at ( $\alpha = 0.05$ ) of inflation on the Economic Value Added in commercial banks in Jordan.

**Hypothesis 3:** There is no statistical significant

impact at ( $\alpha = 0.05$ ) of cash holdings and economic factors on the Economic Value Added in commercial

banks in Jordan under the shallow of the bank size.

**Research model:**



**Figure No.1 Model of the Research**

**Sources:** This model has been prepared by the researcher, based on (Ross, et al, 2014)

**Literature Review:**

Cash holdings, economic factors, economic value added and bank size all represent the current issue in the related literature; although the study of commercial banks' cash holdings and economic value added have not been very promising in the past few years. However, the recent studies have made a very good attempt to find out more about the relationship and the impact of cash holdings, economic factors and economic value added.

Boyd, et al, (2000), **The Impact of Inflation on Financial Sector Performance.**

The paper aims to study the impact of inflation on the financial sector performance and the results show that there is a negative relationship between inflation and the banking sector, the development and the equity market activity. Here under are the results of this paper:

1- The Empirical work shows that deterioration in the financial sector performance has large, negative implications for economic growth. Also, there is a significant, and economically important, negative relationship between inflation and financial development.

2- When inflation rises, the marginal impact of extra inflation on banking and stock market development diminishes rapidly.

- Pinkowitz and Williamson, (2002), **What is a**

**Dollar Worth? The Market Value of Cash Holdings.**

This research aims to investigate the market value of cash held by firms. Which document quality, volatility of the firm's investment choices and chances set, as well as the size of stock and bondholder impact the value shareholders place on cash holdings, Firms with good growth choices have their cash valued at a premium compared to those with poor growth choices. On the other hand, cash is less in firms with stable investment programs and those nearer to financial distress; they do not find that access to the capital markets affects shareholder's valuation of cash holdings. The results of this study are:

1- There are cross-sectional differences in the valuation associated with Cash holding.

2- Firms with greater growth chances or more volatile investment programs have their liquid assets valued at a premium to face value.

3- Firms with greater uncertainty in their investment plan have greater valuations placed on their liquid assets.

4- Shareholders believe the benefits of liquidity outweigh the potential agency problems associated with it. At the same time, cross-sectional tests provide support for the financial slack arguments of both Myers and Majluf (1984) and Jensen (1986).

- Rumler and Waschiczek, (2010), **The Impact of Economic Factors on Bank Profits**. This paper examines the impact of macroeconomic changes on bank profits, which the Austrian banks have experienced over the past 15 years. They used several proxies based on balance sheet data at the individual bank level, as well as macroeconomic variables to ascertain the changes. Their estimation is based on panel regression analysis using unconsolidated data by Austrian banks from 1995 to 2009. They found that disintermediation (fewer loans in total assets); Austrian bank profits are contingent on the business cycle and are positively influenced by the spread between long-term and short-term interest rates. The results of this study are:

1- The results established that banks benefited from the disintermediation tendencies of the past 15 Years. On average, those banks which engaged to a greater degree in business activities outside of conventional lending made higher profits than banks with a larger share of their business in lending.

2- The positive correlation may also be interpreted as disintermediation resulting in a broader diversification of bank assets – and thus of bank profits.

3- Only a few indications were found that a change in ownership structure had an impact on bank profits. While foreign ownership seems to have a negative impact on Austrian bank profitability.

- Ammann, et al, (2011), **Cash Holdings and Corporate Governance around the World**. In this paper, researchers provide new and complementing international evidence on the relationship between cash holdings, corporate governance, and firm value. Their sample consists of a cross section of 1,875 firms from 46 emerging and developed countries in 2007. The results of this study are:

1- A positive effect of cash holdings on firm value and show that this beneficial effect of cash holdings is not evenly distributed among all firms. Specifically, a firm needs to have comparatively good firm-level corporate governance to be able to benefit from increased cash holdings. Also, if a firm has weak firm-level governance; increased cash holdings might be exploited by management and invested in negative NPV projects.

2- They show that a payout of cash by means of dividend payments reduces the possibility for managers to waste cash for negative-NPV projects and hence also positively affects the valuation effect of cash holdings.

3- The results do not substantially change if they also

include Country-level governance into our analyses. This indicates that, at least for their sample and for their governance data, firm-level governance dominates the effects of country-level governance.

- Dumitic and Ridzak, (2012), **Determinants of Banks' Net Interest Margins in Central and Eastern Europe**. The research aimed to analyze the determinants of the net interest margin of banks in Central and Eastern European (CEE) countries over the period of 1999 to 2010. The results showed several main drivers of NIM in the CEE. The results also confirmed the important contribution of higher efficiency to lowering banks' margins. The results of this study are:

1- The results imply that there have been several main drivers of decline in net interest margins in CEE countries in the pre-crisis period.

2- The economic boom (relatively high RGDP growth rates) and rising debt, allowed banks and firms to charge the higher margins due to the high demand for credit.

3- The results showed that throughout the studied period, increased efficiency in the CEE banking sector led to lower margins.

- Sola, et al, (2013), **Corporate Cash Holding and Firm Value**. The aim of this research was to study and analyze the impact of cash holding on firm value for a sample of US industrial firms over the period 2001-2007. In order to do this, they first empirically tested the existence of an optimal cash level that maximized firm value. Secondly, they analyzed whether deviations from the optimum cash level reduced firm value. The results showed that a relationship existed between cash holding and firm value, and it was consistent with the initial analysis. They also found that deviations above and below optimal cash holding decreased firm value. The results of this study are:

1- The study showed empirically that the optimal level is around 14% for a sample of listed US industrial companies over the period from 2001 to 2007.

2- The study results implied a positive marginal value of cash in those situations in which we were below optimal cash level, and a negative marginal value of cash when we were above optimal cash level.

3- It showed that firms could increase market value by being in the optimal level of cash, which seemed rational according to the trade-off between benefits and cost of cash holdings.

- Al-Najjar, (2013), **The Effect of Cash Holdings and Corporate Governance on the Financial**

**Performance of the Firms.** This study aimed to investigate the relationship between cash holding, corporate governance, and firm performance in an emerging market context. By using panel data analysis to an updated data, using Jordanian data context and hand collected data about corporate governance that has not been used before in the Jordanian empirical studies, and by using two types of performance measures: ROA and ROE. The results of this study are: The study found that there is a positive effect of cash holdings on firm financial performance and there is a positive relationship between board size and firm financial performance when the proxy of firm financial performance is ROE. Also, there is a negative relationship using  $MTB^*$  as firm financial performance proxy. There is a positive relationship between audit opinion and firm financial performance only when we use the ROE as a proxy of firm financial performance and there is a positive relationship between size and firm financial performance. This study attempted to determine whether there is a relationship between cash holdings, corporate governance and firm performance in an emerging market context, by using panel data analysis to an updated data, using Jordanian data context and hand collected data about corporate governance that had not been used before in the Jordanian empirical studies.

#### **What might distinguish this Research?**

This research is characterized by the following:

1- Since the relationship between liquidity and profitability is negative and as we know holding too much cash can be detrimental and lead to lower profits, this research represents an attempt to find a positive relationship between cash holding and Economic Value Added.

2- It is an important research in a wide sector in the Jordanian banking sector, based on the investigations of the researcher. The importance generates from concentrating on the impact of cash holdings and economic factors on the economic value added, that may give more stability in financial decisions.

3- Due to the diversity in banking activities in Jordan, the Jordanian banking sector presents a unique case in the study of the impact of cash holdings and economic factors on the economic value added.

4- This research was characterized by using the statistical analysis to measure the impact of cash holdings and economic factors on the economic value added; no actual applied research was carried out previously about economic value added and whether there is an impact on cash holdings and economic factors.

5- This research concentrates on measuring banking economic value added by using financial equations related to cash holdings, economic factors and the economic value added, and the results of this research are an important aspect of investment and decision making for all banks and financial firms. This is one of the leading studies on such a subject.

**Methodology of the Research, Population and Sample:** This research uses regression analysis to examine the impact for a sample of (13) Jordanian commercial banks. The analysis has been carried out as follows:

**First:** A descriptive statistic is used in this research to provide simple summaries about the sample and the measures, such as mean, standard deviation, minimum and maximum, and a number of observations. These statistics may show the nature of data in this research.

**Second:** A panel data analysis approach was used to find the impact and relationships between the variables, cash holdings, economic factors and Economic Value Added from 2003 to 2012, and they are incorporated in the below mentioned equation:

$$EVA_{bt} = \alpha_{bt} + \beta_1 CHVAL_{bt} + \beta_2 NIM_{bt} + \beta_3 RGDP_{bt} + \beta_4 INF_{bt} + \beta_5 SIZE_{bt} + \varepsilon_{bt}$$

Where:  $EVA$  = Economic Value Added,  $\varepsilon$  = Error,  $\alpha$  = Intercept coefficient  $b$  = Bank,  $\beta$  = Coefficient estimators,  $t$  = Period,  $CHVAL$  = Cash Holdings Value,  $NIM$  = Net Interest Margin,  $RGDP$  = Real Gross Domestic Product,  $INF$  = Inflation,  $SIZE$  = Bank Size.

**Population and Sample:** The population used in this research is consisting of (26) listed banks based on Central Bank of Jordan and Association of Banks in Jordan reports between the period (2003-2012), the research sample consists of (13) commercial banks in Jordan, which are well known and established in the Jordanian economy. They have a high trading volume and good reputation. The banks in question are: (Arab Bank, Jordan Ahli Bank, Bank of Jordan, Cairo Amman Bank, the Housing Bank for Trade and Finance, Jordan Kuwait Bank, Jordan Commercial Bank, Arab Jordan Investment Bank, Arab Banking Corporation, Invest bank, Bank Al Etihad, Societe Generale – Jordan and Capital Bank). The

\* **MTB:** Market to Book Value, represent the improvement in performance that is reflected in the price increase and calculated as follows:  $MTB = \text{Market price per share} / \text{book value per share}$  (Al-Najjar, 2013, P: 91).

banks chosen in this research meet the following characteristics:

- The banks have their own identity, and their shares are listed on the Amman Stock Exchange, without any gap in the financial years from (2003-2012).

- The banks' annual reports are available on the websites of the Amman Stock Exchange, Central Bank of Jordan and Association of Banks in Jordan, without any gap for the period from (2003-2012).

- There were no mergers between the banks during the study period.

**The Sources of Data:** The data in this research was collected from the following sources:

**1- The Primary Sources:** Consist of the financial statements and annual reports issued by the Commercial Banks, the Central Bank of Jordan, the Amman Stock Exchange and Association of Banks in Jordan from (2003-2012).

**2- The Secondary Sources:** Represent all the available information in the libraries from books, periodicals, studies, researches, articles, and any other sources from the internet, etc.

#### **Variables Definitions:**

The researcher used some external resources in addition to his own interpretation to reach the following definitions:

**1- Cash Holdings:** Is to measure the value of a bank's cash and liquidity. It also represents a conservative way for determining the proportion of cash in the bank at a specific period of time, calculated in this research by using the following equation (Bragg, 2007, P.61) :

**Cash + Marketable Securities / Total Current Assets**

**2- Economic Factors:** The set of fundamental information that affects the banks' business or an investment's value, the key economic factors in this research include NIM, Inflation and RGDP.

**2.1 Net Interest Margin (NIM):** Is a measure of the difference between the interest income acquired by a bank and the amount of interest paid out to the lenders, relative to the amount of assets. It was calculated in this research by using the following equation (Bryant, 2012):

**(Total interest income – total interest expense) / Total earning assets**

**2.2 Real Gross Domestic Product (RGDP):** Is a measure that reflects and shows the value of all goods and services produced by all sectors in the country in a

given year, expressed in base-year prices. In this research it is yearly figure provided by the Central Bank of Jordan.

**2.3 Inflation:** The rate at which the general level of prices is rising, and purchasing power is falling at the same time. That could lead to another definition related to inflation, namely unexpected increasing in inflation, a situation that occurs when the inflation rate becomes higher than economists' expectations due to changes in economic factors, and it is percentage provided by the Central Bank of Jordan.

**3- Economic Value Added (EVA):** Is a measure of a bank's financial performance and managerial effectiveness in a given year. It is calculated in this research by using the following equation (Ross, et al, 2014, P.2) :

$$\text{EVA} = [\text{ROA} - \text{WACC}] \times \text{Total Capital.}$$

Where:

- EVA = Economic Value Added.

- ROA = Return On Assets, is a financial ratio measure of a banks' ability to turn the assets to profit, which is calculated by commercial banks, and available in the annual reports as percentage. It could also be calculated by using the following equation (Al-Najjar, 2013, P.90):

$$\text{ROA} = \text{Net Income} / \text{Total Assets}$$

- WACC= Weighted Average Cost of Capital, represents a financial metric used to measure the cost of capital, It also reflects the average of the costs of the equity and the debt in a bank, which is calculated in this research by using the following equation (ص ٢٠١١، القيسي):

$$\text{WACC} = (\text{D} / \text{D} + \text{E}) \times \text{KD} (1 - \text{T}) + (\text{E} / \text{D} + \text{E}) \times \text{KE}$$

Where: **D** = Total book value of long and short term debt, **E** = Total book value of equity, **KD** = Interest rate on debt, **T** = Tax rate, **KE** = Cost of equity.

- **Total Capital** = Represents the total capital employed in the bank, which is calculated in this research by using the following equation (ص ٢٠١١، القيسي):

**Capital Employed = Total Assets – Current Liabilities.**

**4- Bank Size:** Is the size of bank operations, and is calculated in this research by taking the natural logarithm of the total assets and by using the following equation (Al- Najjar, 2013, P.92) :

$$\text{Size B} = \text{LN} (\text{Total Assets}) \text{ B}$$

**Testing the Hypothesis:**

This research tested the following hypotheses:

**Result of testing the main hypothesis: There is no statistical significant impact at ( $\alpha = 0.05$ ) of cash holdings and economic factors on the Economic Value Added in the commercial banks.**

To test the main hypothesis above, the researcher used the (Multiple Linear Regression Analysis), and the results are shown in the following table:

As seen from table (1) above, the value of (t) for the independent variables (cash holdings value and Net Interest Margin (NIM) has a statistical significance on (0.007) and (0.010) and it is less than ( $\alpha = 0.05$ ), which means the null hypothesis is rejected, there is a statistical significant impact of Cash Holdings Value and Net Interest Margin (NIM) on the Economic Value Added in Jordanian commercial banks. On the other hand, the results showed that the null hypothesis is accepted for the RGDP and inflation and there is no statistical significant impact of Real Gross Domestic Product (RGDP) and inflation on the Economic Value Added in Jordanian

commercial banks. The results show that the coefficient of determination is (0.122), that means the independent variables makes up for (12.2%) of the statistical variance on the Economic Value Added. The researcher's economic explanation considered the following reasons to be behind that positive relationship between cash holding and the Economic Value Added and they are: core competencies and knowledge resources of the commercial banks, including organization structure, employment expert skills in commercial banks, employment centripetal force, staff innovation capability in the commercial banks, the size of the commercial banks' clients and finally, bank brand recognition.

**Result of testing hypothesis 1: There is no statistical significant impact at ( $\alpha = 0.05$ ) of cash holdings value on the Economic Value Added in commercial banks.** To test hypothesis 1 above, the researcher used the (Simple Linear Regression Analysis), and the results are shown in the following table:

**Table (1)**  
**Results of the Multiple Linear Regression Analysis for the impact of Cash Holdings and Economic Factors on the Economic Value Added**

Variables	Value of B	Value of Beta	Value of t	Sig.
Intercept	-892881.434		-0.696	0.488
Cash Holdings Value	6394337.619	0.305	2.737	0.007
Net Interest Margin	-46458907.409	-0.270	-2.626	0.010
Real Gross Domestic product	659.191	0.529	1.082	0.282
Inflation	-25594.060	-0.326	-0.673	0.503

Coefficient of determination = 0.122

**Table (2)**  
**Results of the Simple Linear Regression Analysis for the impact of Cash Holdings Value on the Economic Value Added**

Variables	Value of B	Value of Beta	Value of t	Sig.
Intercept	46635.766-		0.372-	0.712
Cash Holdings Value	2705830.849	0.456	3.403	0.001

Coefficient of determination = 0.208

As seen from table (2) above the (t) value for the independent variable cash holdings value is (3.403) and has a statistical significance on (0.001) which is less than ( $\alpha = 0.05$ ) and thus the null hypothesis is rejected and there is a statistical significant impact of cash holdings value on the Economic Value Added in Jordanian commercial banks. Also, the results showed that the

coefficient of determination is (0.208), which means the independent variable (cash holdings value) make up for (20.8%) of the statistical variance on the dependent variable (Economic Value Added). On the other hand, the (Beta) showed that there is a positive relationship between cash holdings value and the Economic Value Added, the higher cash holdings value, the higher

Economic Value Added (EVA) in Jordanian commercial banks.

**Result of testing hypothesis 2: There is no statistical significant impact at ( $\alpha = 0.05$ ) of economic factors on the Economic Value Added in commercial banks.**

To test hypothesis 2 above, the researcher used the (Multiple Linear Regression Analysis), and the results are shown in the following table:

As seen from table (3) above, the (t) value for the independent variable Net Interest Margin (NIM) is (-2.136) and has a statistical significance on (0.035) which is less than ( $\alpha = 0.05$ ), thus the null hypothesis is rejected. There is a statistical significant impact of Net Interest Margin (NIM) on the economic value added in commercial banks in Jordan. On the other hand, the results showed that the (t) value for the independent variables (RGDP) and Inflation are (0.636) and (-0.533)

and they have a statistical significance on (0.527) and (0.595) which more than ( $\alpha = 0.05$ ), thus the null hypothesis is accepted, and there is no statistical significant impact at ( $\alpha = 0.05$ ) of Real Gross Domestic product (RGDP) and inflation on the Economic Value Added in Jordanian commercial banks. The results also showed that the coefficient of determination is (0.052), which means the independent variables (Economic factors: NIM, RGDP and inflation) makes up for (5.2%) of the statistical variance on the dependent variable (Economic Value Added).

**Result of testing sub-main hypothesis number 1: There is no statistical significant impact at ( $\alpha = 0.05$ ) of Net Interest Margin on the Economic Value Added in commercial banks.**

To test sub-main hypothesis number 1 above, the researcher used the (Simple Linear Regression Analysis), and the results are shown in the following table:

**Table (3)**  
**Results of the Multiple Linear Regression Analysis for the impact of the Economic Factors on the Economic Value Added**

Variables	Value of B	Value of Beta	Value of t	Sig.
Intercept	1319766.168		1.282	0.203
Net Interest Margin	-38558962.366	-0.224	-2.136	0.035
Real Gross Domestic product	395.201	0.317	0.636	0.527
Inflation	-20952.353	-0.267	-0.533	0.595

Coefficient of determination = 0.052

**Table (4)**  
**Results of the Simple Linear Regression Analysis for the impact of Net Interest Margin (NIM) on the Economic Value Added**

Variables	Value of B	Value of Beta	Value of t	Sig.
Intercept	4398.388		0.023	0.982
Net Interest Margin	11963730.172	0.256	2.017	0.048

Coefficient of determination = 0.066

As seen from table (4) above, the (t) value for the independent variable Net Interest Margin (NIM) is (2.017) and has a statistical significance on (0.048) which is less than ( $\alpha = 0.05$ ), thus the null hypothesis is rejected, there is a statistical significant impact at ( $\alpha = 0.05$ ) of Net Interest Margin (NIM) on the Economic Value Added in Jordanian commercial banks. The results showed that the coefficient of determination is (0.066), which means the independent variable Net Interest Margin make up for

(6.6%) of the statistical variance on the dependent variable (Economic Value Added). On the other hand, (Beta) showed that there is a positive relationship between Net Interest Margin (NIM) and the Economic Value Added, the higher Net Interest Margin(NIM), the higher economic value added (EVA) in Jordanian commercial banks.

**Result of testing sub-main hypothesis number 2: There is no statistical significant impact at ( $\alpha = 0.05$ )**

**of Real Gross Domestic Product (RGDP) on the Economic Value Added in commercial banks.**

To test sub-main hypothesis number 2 above, the researcher used the (Simple Linear Regression Analysis), and the results are as shown on the following table:

As seen from table (5) above, the (t) value for the independent variable Real Gross Domestic Product (RGDP) is (2.708) and has a statistical significance on (0.009) which is less than ( $\alpha = 0.05$ ), that means the null hypothesis is rejected, and there is a statistical significant impact at ( $\alpha = 0.05$ ) of Real Gross Domestic Product on the economic value added in Jordanian commercial banks. On the other hand, the results showed that the coefficient of determination is (0.138), which means the independent variable Real Gross Domestic Product make up for (13.8%) of the statistical variance on the dependent

variable (Economic Value Added). The (Beta) is calculated here by using the Simple Linear Regression analysis and it showed that there is a positive relationship between Real Gross Domestic Product (RGDP) and the Economic Value Added (EVA) in the Jordanian commercial banks. The higher the Real Gross Domestic Product, the higher Economic Value Added in Jordanian commercial banks.

**Result of testing sub-main hypothesis number 3: There is no statistical significant impact at ( $\alpha = 0.05$ ) of inflation on the Economic Value Added in commercial banks.** To test sub-main hypothesis number 3 above, the researcher used the (Simple Linear Regression Analysis), and the results are shown in the following table:

**Table (5)  
Results of the Simple Linear Regression Analysis for the impact of Real Gross Domestic Product (RGDP) on the Economic Value Added**

Variables	Value of B	Value of Beta	Value of t	Sig.
Intercept	574903.137-		1.718-	0.093
Real Gross Domestic product	116.563	0.371	2.708	0.009

Coefficient of determination = 0.138

**Table (6)  
Results of the Simple Linear Regression Analysis for the impact of Inflation on the Economic Value Added**

Variables	Value of B	Value of Beta	Value of t	Sig.
Intercept	1481378.844		2.860	0.007
Inflation	10097.256-	0.323-	2.182-	0.035

**Coefficient of determination = 0.104**

As seen from table (6) above, the (t) value for the independent variable Inflation is (-2.182) and has a statistical significance on (0.035) which is less than ( $\alpha = 0.05$ ) thus the null hypothesis is rejected and there is a statistical significant impact at ( $\alpha = 0.05$ ) of inflation on the Economic Value Added in Jordanian commercial banks. The results showed that the coefficient of determination is (0.104), which means the independent variable inflation make up for (10.4%) of the statistical variance on the dependent variable (Economic Value Added). The researcher used the Simple Linear Regression analysis to calculate (Beta) and the result showed that there is a negative relationship between

inflation and the Economic Value Added.

**Result of testing hypothesis 3: There is no statistical significant impact at ( $\alpha = 0.05$ ) of Cash Holdings and Economic Factors on the Economic Value Added in commercial banks under the shallow of the bank size.**

To test hypothesis 3 above, the researcher used the (Multiple Linear Regression Analysis), the results are shown in the following table:

As seen from table (7) above, the (t) values for the independent variables cash holdings value and Real Gross Domestic product (RGDP) are (4.639) and (2.520) and they have a statistical significance on (0.000) and (0.013)

which are less than ( $\alpha = 0.05$ ), thus the null hypothesis is rejected. There is a statistical significant impact at ( $\alpha = 0.05$ ) of cash holdings value and RGDP on the Economic Value Added in Jordanian commercial banks under the shallow of the bank size. The result also showed that the (t) value for the independent variables Net Interest Margin (NIM) and inflation are (**0.462**) and (**1.761-**) have a statistical significance on (**0.645**) and (**0.082**) which is more than ( $\alpha = 0.05$ ), thus the null hypothesis is

accepted and there is no statistical significant impact at ( $\alpha = 0.05$ ) of Net Interest Margin and inflation on the Economic Value Added in Jordanian commercial banks under the shallow of the bank size. On the other hand, the coefficient of determination is (0.459), which means the independent variables (cash holdings value, NIM, RGDP and Inflation) makes up for (45.9%) of the statistical variance on the dependent variable (Economic Value Added).

**Table (7) - Results of the Multiple Linear Regression Analysis for the impact of Cash Holdings and Economic Factors on the Economic Value Added under the shallow of the Bank Size**

Variables	Value of B	Value of Beta	Value of t	Sig.
Intercept	8013720.417		5.162	0.000
Cash Holdings Value	8668356.942	0.413	4.639	0.000
Net Interest Margin (NIM)	7231749.986	0.042	0.462	0.645
Real Gross Domestic Product	1226.088	0.983	2.520	0.013
Inflation	53274.309-	0.679-	1.761-	0.082

Coefficient of determination = 0.459

**Conclusions and Recommendations:** The results of this research are divided as follows:

**Cash Holdings:** The Research found that there is a statistical significant impact of cash holdings which represents the value of cash on the Economic Value Added (EVA) in the Jordanian commercial banks. Also, the results showed that there is a positive relationship between Cash holdings and Economic Value Added by using the simple and multiple linear regressions analyses to test the hypothesis which consisted of cash holdings value. The result showed there is a statistical significant impact of cash holdings value on the Economic Value Added in Jordanian commercial banks. A similar result was reached by Ammann, et al (2011), who showed that there is a positive impact of cash holdings on firm value and showed that this beneficial impact of cash holdings is not evenly distributed among all firms. Also, Al-Najjar, (2013) reported a positive effect of cash holdings on firm performance. This means that the more cash to be held by Jordanian commercial banks the better the Economic Value Added. In other words, having extra cash may enhance the bank's Economic Value Added because holding the cash may give the banks more opportunities to invest in better projects that may provide better Economic Value Added in the future.

**Economic Factors:** The economic factors consist of (Net Interest Margin, Real Gross Domestic Product and

inflation), the researcher used the Multiple Linear Regression Analyses to test hypothesis number two. The research found that there is a statistical significant impact of Net Interest Margin (NIM) only on the Economic Value Added in Jordanian commercial banks. Also, there is no statistical significant impact of the Real Gross Domestic product (RGDP) and inflation on the Economic Value Added in Jordanian commercial banks. A similar result was reached by Rumler and Waschiczek (2010), who showed that only some economic factors had an impact on bank profit and value, and the positive correlation may affect banks assets and profits. This means that commercial banks have to pay attention when dealing with the economic factors (Net Interest Margin, Real Gross Domestic Product and inflation).

**Net Interest Margin:** The research found that there is a statistical significant impact of Net Interest Margin on the Economic Value Added in Jordanian commercial banks by using the Simple Linear Regression analyses to test the first sub main hypothesis. Also, the results showed that there is a positive relationship between the NIM and the EVA. This means that the higher the NIM, the higher the EVA in Jordanian commercial banks. Dumitic and Ridzak's (2012), study about determinants of banks' net interest margins showed that increased efficiency in the Central and Eastern European banking sector led to a lower interest margin, and there is a

positive relationship between the demand and the Net Interest Margin (NIM).

**Real Gross Domestic Product:** The research found that there is a statistical significant impact of Real Gross Domestic Product (RGDP) on the Economic Value Added in Jordanian commercial banks by using the Simple Linear Regression analyses to test the second sub main hypothesis. Also, the results showed that there is a positive relationship between the RGDP and the EVA. This means that the higher the RGDP, the higher the EVA in commercial banks. **Inflation:** The research found that there is a statistical significant impact of inflation on the Economic Value Added in Jordanian commercial banks by using the Simple Linear Regression analyses to test the third sub main hypothesis. The research found that there is a negative relationship between inflation and the Economic Value Added in Jordanian commercial banks, the higher the inflation rates, the lower the Economic Value Added. A similar result was reached by Boyd, et al (2000), who showed that there is a negative impact and relationship between inflation and financial development. Their results also showed that inflation has a negative impact on economic growth. If the commercial banks want to have high Economic Value Added, then they have to pay attention to inflation because it represents a contemporary issue by which that the Jordanian economy in general, and commercial banks in particular maybe affected.

**Cash Holdings, Economic Factors and Economic Value Added under the shallow of the control variable (Bank Size):** The researcher used the bank size as a control variable to study the impact of cash holdings and economic factors on the Economic Value Added and by using the Multiple Linear Regression analyses to test hypothesis number three. The research found that there is a statistical significant impact of Cash Holdings Value and Real Gross Domestic product (RGDP) on the Economic Value Added in Jordanian commercial banks under the shallow of bank size. The results also showed

that there is no statistical significant impact of Net Interest Margin (NIM) and inflation on the Economic Value Added in Jordanian commercial banks under the shallow of bank size.

**Recommendations:** The researcher has the following recommendations:

1- Commercial banks in Jordan which concerns about earnings, cash flows, Economic Value Added and banking sector efficiency should organize and manage their policies and methods when dealing with Net Interest Margin. Previous studies showed that earnings and cash flows are heavily dependent on Net Interest Margin. Other studies showed also that the changes in Net Interest Margin imply lower banking sector efficiency.

2- The Central Bank and government should be more careful and accurate when dealing with monetary policy, fiscal policy and incomes' policies, since they represent the most important economic policies to control Inflation and Real Gross Domestic products by controlling these key factors, they will have a better understanding as to how it arises and how it could affect the commercial banks and the whole economy.

3- Immoderate efforts should be exerted by Jordanian commercial banks with Central Bank of Jordan to adopt, create and develop new ideas that could help bank management and activates, because they represent very important elements that may affect commercial banks size and capacity.

4- For the next investigations studies in this topic, researcher suggest to use extended sample and other economic factors which may provide a better understanding to the impacts and the relationships between the chosen variables.

5- For any further study about the same topic, there might be a need to study the correlation and the awareness of the public about the financial issues because these types of studies stimulates the appropriate environment to develop the Jordanian financial sector in particular and the Jordanian economy in general.

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## أثر النقد المحتفظ به والعوامل الاقتصادية على القيمة الاقتصادية المضافة في البنوك التجارية

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### ملخص

هدفت هذه الدراسة الى تحليل وتوضيح أثر النقد المحتفظ به والعوامل الاقتصادية على القيمة الاقتصادية المضافة في البنوك التجارية. تمثل الجانب العملي في الدراسة بتحليل البيانات المالية للبنوك التجارية الأردنية وذلك من خلال استخدام تحليل الانحدار. وكانت نتائج الدراسة وجود أثر ذي دلالة إحصائية للنقد المحتفظ به على القيمة الاقتصادية المضافة في البنوك التجارية الأردنية. كما أظهرت نتائج الدراسة أن هناك أثراً ذا دلالة إحصائية لصافي هامش الفائدة على القيمة الاقتصادية المضافة في البنوك التجارية الأردنية. كذلك أظهرت نتائج الدراسة أن هناك أثراً ذا دلالة إحصائية للنتائج المحلي الإجمالي الحقيقي على القيمة الاقتصادية المضافة في البنوك التجارية الأردنية. أما فيما يتعلق بالتضخم كعامل من العوامل الاقتصادية المستخدمة في هذه الدراسة فقد أظهرت النتائج وجود أثر ذي دلالة إحصائية للتضخم على القيمة الاقتصادية المضافة. أخيراً وفي ظل وجود حجم البنك كمتغير ضابط كانت النتائج مختلفة بعض الشيء إذ أظهرت الدراسة وجود أثر ذي دلالة إحصائية للنقد المحتفظ به والنتائج المحلي الإجمالي الحقيقي على القيمة الاقتصادية المضافة في البنوك التجارية في ظل وجود حجم البنك كمتغير ضابط. كما أظهرت عدم وجود أثر ذي دلالة إحصائية لصافي هامش الفائدة والتضخم على القيمة الاقتصادية المضافة في البنوك التجارية عند الأخذ بعين الاعتبار حجم البنك كمتغير ضابط. وفي ضوء نتائج هذه الدراسة فقد تم تقديم مجموعة من التوصيات.

**الكلمات الدالة:** الأثر، النقد المحتفظ به، القيمة الاقتصادية المضافة، الناتج المحلي الإجمالي الحقيقي، صافي هامش الفائدة، التضخم، العوامل الاقتصادية، حجم البنك.

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