

## Evaluate the fixed measurement of things value by JOD– Historical Study

تقييم ثبات مقياس قيم الاشياء بالدينار الاردني – دراسة تاريخية

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Received: 12/01/2024

Accepted: 30/01/2024

Published: 03/03/2024

### Abstract:

This study aims to find the Jordanian Currency (JOD) possibility to become a fixed measurement for things value. The study methodology is collecting the directions of Jordanian foreign reserve by Central Bank of Jordan (CBJ) based to its annual reports during 1964-2022. Searchers used tables to find behavior of its changing every year as a qualitative and historical study. The result shows that JOD is not a fixed measurement for things value in long term because of international standards changings. These changing caused loss of gold covering to buy things and reduce Jordanian foreign currencies value, such as every gold ounce was equal 35 USD at time of building the Jordanian foreign reserve in 1964 but now it about 2000 USD. The changing is continues impacting accepted levels of guarantee and liquidity negatively. Searchers suggested to increase local producing to cover local needs than import and to buy gold.

**Key words: JOD, Foreign reserves, Gold covered, international standards, and value**

### Abstract in Arabic:

تهدف هذه الدراسة الى ايجاد احتمالية ان تكون عملة الدينار الاردني مقياسا ثابتا لقيم الاشياء. واتبعت منهجية الدراسة جميع تعليمات البنك المركزي الاردني المتعلقة بالاحتياطي الاجنبي الاردني بناء على تقاريرها السنوية خلال الفترة 1964-2022. واستخدم الباحثان جداول لايجاد تغير سلوكها كل سنة تبعا للدراسة النوعية التاريخية. وظهرت النتيجة بأن الدينار الاردني ليس مقياسا ثابتا لقيم الاشياء على المدى الطويل بسبب تغيرات المعايير الدولية. فقد سببت التغيرات بفقد غطاء الذهب عند شراء الاشياء اضافة لخفض قيمة الاحتياطي الاجنبي وكمثال فقد كانت اونصة الذهب تساوي 35 دولارا وقت بناء الاحتياطي الاجنبي الاردني في 1964، لكنها الآن تساوي تقريبا 2000 دولار. يعد التغير مستمرا ويؤثر في مستويات قبول الضمان والسيولة سلبيا. واقترح الباحثان زيادة الانتاج المحلي لتغطية الحاجة المحلية أكثر من الاستيراد وكذلك شراء الذهب.

**الكلمات المفتاحية:** الدينار الاردني، الاحتياطي الاجنبي، غطاء الذهب، معايير دولية، و القيمة

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## **1. INTRODUCTION**

Years ago, the gold, silver, and copper or nickel were the official currencies. Muslim jurists have purpose to protect the wealth and rights by the rule of keep currency as fixed measurement for things value (Annashmi, 1988, p261-264 & p288). But since 1973 every member in international Monetary Fund (IMF) faces problem of currencies prices changing after canceled the equivalent by gold. Linking by currency with increased price or decreased price or floating price is not suitable because of different countries inflation cases and general budget deficient cases (Gerakis, 1976, p 35). Countries have many types of exchange price such as floating, or make margin between selling price and buying price or apply two types of prices based to the aim (CBJ annual report, 1971, p 63-64). The problem comes after the country has continuous currency exchange reducing because it increase cost of import and increase export more and more to cover import (Annashmi, 1988, p 268-269) every country has to "involve the selection of currencies to be included in the composite and the weights to be attached to each currency" and "Country concerned must have a formula to compute the changes in exchange rates which will stabilize the value of its currency in terms of its basket" (Gerakis, 1976, p 35). Also, Coats, (1992) explained that impact of including baskets by SDR and EURO. He found that "the manner in which the value of each unit is determined or established and its behavior over time are of primary importance". EX: "Both the SDR and the ECU have their values defined in reference to baskets of currencies. Addition to that some countries used cryptocurrencies that have covered with value assets as alternative as major foreign currencies (Drakopoulos et al, 1 /Oct/ 2021).

As Jordan a case study, JOD is linked by USD since 1995. Jordan is a developing country it cannot get guarantee of JOD as a developed country by apply the international standard of getting the strength from economic factors and social factors. IMF reports explained suitable case for Jordan with limits (Lafarguette et al, March/ 2022 & IMF staff, Jun/2023). Sweidan, (2011) explained monetary policy inertia as case in Jordan because of JOD link with USD and Chami et al, (2007) explained the using a measures of reserves adequacy form traditional measures to compare Jordanian foreign reserve holdings with other emerging market because of different countries classified. Toukan, (2010) explained problem of conflict between factors of success as political, economic, public policy, market consideration international needs and national need. Ex: government used special drawing rights (SDR) to reduce its deficient in 2023 rather than invest it by CBJ assets.

### **1.1 The study problem:**

This study problem concentrated on possibility of using JOD as fixed value measurement to evaluate things by study the directions of Jordanian foreign reserves as a guarantee to find this possibility. Foreign reserve is the major foreign currencies, gold, and SDR. The problem major question: Is directions of foreign reserves by CBJ impact JOD to become a fixed measurement for things value?

### **1.2 The study objectives:**

The aim is to find the CBJ directions of foreign reserves from 1964-2022 that impacted JOD to become a fixed measurement for things value.

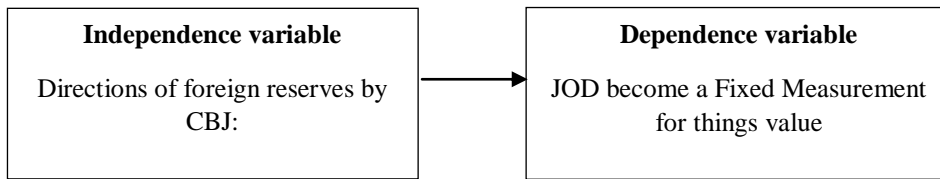
### **1.3 The methodology:**

Searchers used inductive study by comparing between rules from 1964- 2022. It used the issues by Jordanian central bank annual reports in order to find the directions every year. It

depended on quantitative data in text by annual reports, other hand the searchers studied the foreign reserves changing to find behavior of foreign currencies and gold in the Jordanian foreign reserves in order to discuss its guarantee level to keep Jordanian currency meeting the rule of fixed measure for things value in Jordan. Searchers used tables to organize quantitative data. The hypotheses test is depended on these tables in order to find the changing behavior of directions foreign reserves by CBJ from 1965-2023 to protect Jordanian currency exchange as fixed measure for the things value. And to discuss hypotheses test result, the searchers used line shapes issued by Financial and economic international internet sites:"tradeconomics.com" and "investing.com".

**1-4 Hypotheses:** H1: Directions of foreign reserves by CBJ impact JOD to become a fixed measurement for things value. The study model is shown as follow:

**Fig 1: the dependence and independence variable for the study model**



*Source: by authors*

**1.5 The limits:** there are limits for this study as follow:

- It concentrates on the gold and major foreign currencies in the foreign reserves
- It is a historical study of directions the foreign reserves by CBJ
- The study follows the directions of foreign reserves by CBJ during 1964-2023 based to the CBJ annual reports.
- To discuss hypotheses, the study used line shapes showed by "tradeconomics.com" and "investing.com" to find behavior of major foreign currencies and gold

**1.6 The previous studies:**

Chami et al, (2007) tried to find a measures of reserves adequacy form traditional measures to compare Jordanian foreign reserve holdings with other emerging market because of different countries classified. There was suitable foreign reserve to meet JOD link with USD. Maziad, (2010) explained that Jordan depends on aid and transferring from expatriates to get foreign currencies, therefore its foreign reserve affected negatively by oil price reducing, because of this case it has to get loan in foreign currencies with interest rate as in the early 1980s. Toukan, (2010) explained that after 1973 the International Monetary System have reverted to amore market oriented, hyper, and voluntary. That cause problems of agreement between national with international considerations and political with economic, beside public policy with market considerations. The solution by International Monetary Fund controlling with its facilities supporting and there is a need to solving the International Monetary System problem to face fail in financial and economics of countries beside the problem of applying the Bretton Woods system include intervening in foreign currencies markets. Sweidan, (2011) found the inertia of Jordanian monetary policy in the Jordanian economy by data during 1994-2007 because it is neutral owing to the adoption of a fixed exchange rate with the US dollar and found following of interest rate based to USD not follow the Jordanian inflation or the gap of output. Al-Assaf (2017) found that money supply-reserves ratio is the one of the most

significant indicators in predicting currency crisis for Jordan as indicator used for an early warning system to explain any potential currency crisis for the case of Jordan. Hijazeen & Al-Al Qaisi, (2018) explained the CBJ responsibility to control the banks in Jordan based to standards to avoid the impact of international financial crises and keep trust in the Jordanian banks sector. Assaf, (2018) found dollarization phenomenon in Jordan on assets and liabilities. Moh'd et al, (2019) explained setting an evaluation policy of the Dinar compatible with the Jordanian economy as a limit and support it by maintaining and managing the foreign reserve. Al-Sharkas et al, (2023) Explained affection of many factors and CBJ has developed a Forecasting and Policy Analysis System (FPAS) to serve as a reliable analytical framework for decision-making after JOD link USD.

## **2. Hypotheses test**

To test hypotheses (H1), the searchers followed the historical data of directions the Jordanian foreign reserves by CBJ and followed the JOD /GBP beside JOD/USD during 1964-2023 in order to find relation between historical directions changing and JOD/USD besides JOD/GBP historical changing. Tables explain directions changing and JOD/USD with JOD/GBP changing. The reason of that depend on the historical international trading agreement after USD become the way of valuate foreign reserves while GBP is an alternative currency to the USD. And as to long period from 1964-2023 the searchers divided tables based to historical events as follow:

- Event before cancel the gold cover
- Event after cancel the gold cover in 1972 with explain CBJ the directions of dividing content of foreign reserve by weight
- Event after cancel the gold cover without explain CBJ the directions of dividing content of foreign reserve by weight

H1: Directions of foreign reserves by CBJ impact JOD to become a fixed measurement for things value

By collecting the directions of foreign currencies portfolio by Jordan Center bank depending on the CBJ annual reports, there are three tables explain the Directions of major foreign currencies portfolio by CBJ.

Before the year 1972, there were equivalent prices of major currencies with gold even USD but after 15/12/1971 this equivalent prices were change and give flexibility for the international monetary system by raise margin of currencies exchange prices from 1% to 2.25% (CBJ annual report, 1971, p63-64)

### **2-1 the directions of Jordanian foreign reserve by CBJ before 1972**

The directions are collected during 1964-2022 based to the CBJ annual reports and collecting the JOD/GBP as the oldest major foreign currency beside JOD/USD as to the Jordanian foreign reserve by USD and to show the impact of JOD link by USD.

**Table 1: The Directions of major foreign currencies portfolio by CBJ before the year 1972**

By the end of Year	The Directions of major foreign currencies and gold portfolio	JOD/GBP	JOD/USD
<b>1964</b>	In 1/10/1964, the CBJ start working (CBJ annual report, 1964&1965, p5) and (25,055,032) GBP became the only covering JOD in circulation (CBJ annual report, 1964 & 1965, p6). Therefore, JOD increase or decrease by follow GBP. Jordan import had been done only by GBP and bartering contract by buying goods with goods (CBJ annual report, 1964&1965, p48). JOD = GBP (CBJ annual report, 1967, p39)	<b>1 GBP</b>  (CBJ annual report, 1969, p11)	<b>In DEC/1964 2.677 USD</b>  ( <a href="https://tradingeconomics.com/united-kingdom/currency">https://tradingeconomics.com/united-kingdom/currency</a> )
<b>1965</b>	The aim of foreign reserve became to get liquidity, profitability and guarantee*, therefore it changes the cover of JOD by portfolio but GBP was the almost of it. It was divided to 3% gold, 0,8%GBP in cash, 5.5% USD in cash, 45.9% British treasury bills, and 43.9% British government bonds (CBJ annual report, 1964, p13) and it has gold in the International Monetary Fund = 979 thousand JOD (CBJ annual report, 1969, p11) JOD = GBP (CBJ annual report, 1967, p39)	<b>1 GBP</b>  (CBJ annual report, 1969, p11)	<b>In DEC/1965 2.7714 USD</b>  ( <a href="https://tradingeconomics.com/united-kingdom/currency">https://tradingeconomics.com/united-kingdom/currency</a> )
<b>1966</b>	For more flexibility for liquidity, profitability, and guarantee the foreign reserve portfolio become more diversity. Jordan used GBP for international trading as with Yugoslavia and it used JOD as part of dealing based to bilateral agreement and bartering contract to export Phosphate to cover import (CBJ annual report, 1966, p37-38) Foreign reserve included gold 3.3%, GBP 69.6%, USD 25.9%, DEM 1.1% , FF 0.013% , CHF 0.01%, and Other currencies 0.01% (CBJ annual report, 1967, p24) and it has gold in the International Monetary Fund = 1054 thousand JOD (CBJ annual report, 1969, p11) JOD = GBP (CBJ annual report, 1967, p39)	<b>1 GBP</b>  (CBJ annual report, 1969, p11)	<b>In DEC/1966 2.7399 USD</b>  ( <a href="https://tradingeconomics.com/united-kingdom/currency">https://tradingeconomics.com/united-kingdom/currency</a> )
<b>1967</b>	Foreign reserve had been changed based to the standards: liquidity, profitability, and guarantee. Foreign reserve included gold 2.5%, GBP 44.5%, USD 27.5%, DEM 3.1%, FF 9.2%, CHF 13%, and other currencies 0.2%(CBJ annual report, 1967, p24) while GBP price was reduced 14.3% by the British government(CBJ annual report, 1967, p39) and 0.857143 JOD = 1 GBP (CBJ annual report, 1967, p41) and it has gold in the International Monetary Fund = 1124 thousand JOD (CBJ annual report, 1969, p11)	<b>About 1.160 GBP</b>  (CBJ annual report, 1969, p11)	<b>In NOV/1964 1GBP=2.8029 USD and 1.16GBD=?USD therefore 1JOD = 3.25 USD</b>  ( <a href="https://tradingeconomics.com/united-kingdom/currency">https://tradingeconomics.com/united-kingdom/currency</a> )
<b>1968</b>	Foreign reserve had been changed based to the standards: liquidity, profitability, and guarantee. It foreign reserve from 86,032,000 JOD to 151,000,000 JOD and it has gold in the International Monetary Fund = 1430 thousand JOD (CBJ annual report, 1969, p11)	<b>Not find</b>	<b>Not find</b>
<b>1969</b>	Foreign reserve had been changed based to the standards :liquidity, profitability, and guarantee It included gold 12.81%, GBP 34.22%, USD 22.72, DEM 12.51%, FF1.37%, CHF 14.21%, ITL 1.09%, CAD 0.98%, and other currencies 0.09%(CBJ annual report, 1970, p32). It reduced foreign reserve from 100151 thousand JOD to 92318 thousand JOD. It has gold in the International Monetary Fund = 1431 thousand	<b>Not find</b>	<b>Not find</b>

	JOD (CBJ annual report, 1969, p11)		
<b>1970</b>	Foreign reserve had been changed based to the standards: liquidity, profitability, and guarantee. In the foreign reserve, the Special Drawing Rights appeared to equal 1.05%, gold 13.16%, GBP 36.74%, USD 19.28, DEM 13.93%, FF1.35%, CHF 13.75%, ITL 0.02%, CAD 0.57%, and other currencies 0.15% (CBJ annual report, 1970, p32)	<b>Not find</b>	<b>Not find</b>
<b>1971</b>	Foreign reserve had been changed based to the standards: liquidity, profitability, and guarantee. In the foreign reserve, the Special Drawing Rights appeared to equal 2.1%, gold 13.5%, GBP 29.1%, USD 14.8, DEM 16.4%, FF 8.3%, CHF 14.8%, JPY 0.3%, and other currencies 0.7% (CBJ annual report, 1971, p70) equivalent currencies prices was applied by gold such as every one-ounce weight equal 35 USD based to the Bretton Woods agreement in 1944. US government cancel the gold cover for USD and after 15/12/1971 there were changing of equivalent prices of major currencies with gold. The international Monetary Fund asked the members to determine the suitable center exchange rate for them for USD, GBP, gold and Special Drawing Rights (CBJ annual report, 1971, p63-64)	<b>Not find</b>	<b>2.8 USD</b> (CBJ annual report, 1971, p 65)

*sources: Abbreviations are explained by appendences and see CBJ annual reports (1964 & 1965) – 1971 (Arabic copy).*

*\* Foreign reserve liquidity is to get cash there for the most liquidity is the cash then gold strips after that treasury bills and at last become the special drawing rights, but, guarantee shows the strength of JOD cover by foreign currencies, gold, and special drawing rights (CBJ annual report, 1971, p69), while profitability comes by investing with foreign currencies loan with interest or speculate by currencies prices changing. EX: in 1969 there were reducing of FF amount and increased DEM amount because of fears that FF reducing exchange prices and expecting of increasing DEM exchange price on other hand USD had floating price in 1971 (CBJ annual report, 1969, p38)*

## 2-2 the directions of Jordanian foreign reserve by CBJ after 1972

**Table 2: The Directions of major foreign currencies portfolio by CBJ after the year 1972 with explain CBJ the directions of dividing content of foreign reserve by weight**

By the end of Year	The Directions of major foreign currencies portfolio	JOD/GBP Average price		JOD/USD Average price	
		Buying	Selling	Buying	Selling
<b>1972</b>	Foreign reserve had been changed based to the standards: liquidity, profitability, and guarantee. Foreign reserve included: gold 13.5%, special drawing rights 3%, GBP 31.7%, USD 18.2, DEM 16.1%, FF 8.5% CHF 8%, JPY 0.3% , and other currencies 0.7% the risk of profitability came after CHF reduce its interest rate (CBJ annual report, 1972, p 97)	1.186	1.193	2.786	2.801
<b>1973</b>	Foreign reserve had been changed based to the standards: liquidity, profitability, and guarantee. In this year the <u>foreign currencies floating prices became away to adjusted the balance of payment</u> by support with the international Monetary Fund to make the adjustments (CBJ annual report, 1976, p 64)	1.300	1.311	3.030	3.049

<b>1974</b>	Foreign reserve had been changed based to liquidity, guarantee, and profitability. It include: gold 14%, GBP 10%, USD 22%, DEM 27%, CHF 12%, (FB & ANG) 7% beside the other currencies 8%(CBJ annual report, 1974, p 124)	1.340	1.351	3.165	3.185
<b>1975</b>	Foreign reserve had been changed based to liquidity, guarantee, and profitability by reduce size of GBP 82% and double USD, FF, and other currencies , also added item by contributing to regional and international financial institutions beside special drawing rights with simple percentage even in 1974(CBJ annual report, 1975, p 142)	1.484	1.497	3.021	3.040
<b>1976</b>	Foreign reserve had been changed based to liquidity, guarantee, and profitability based to the environment change. Gold had the float price as goods price by market and some foreign currencies prices was increased as USD, DEM, and CHF and other currencies was reduced as FF and GBP there for the foreign reserve was adjusted by new divisions: gold15%, USD 30%, DEM 20%, CHF 13%, FB2% , ANG 2%, JYP 8%, (SAR & KWD) 4%, and other currencies 6%(CBJ annual report, 1976, p 71)	1.751	1.770	3.012	3.030
<b>1977</b>	Foreign reserve had been changed based to liquidity, guarantee, and profitability based to the environment change The center bank allowed to sell the gold by foreign currencies and special drawing rights became alternative to gold to get the foreign currencies (CBJ annual report, 1977, p 147). Therefore, foreign reserve adjusts to include: USD20%, DEM 25%, CHF 18%, FB 6%. ANG5%, JPY 14%, GBP5%, other currencies 7% and no gold(CBJ annual report, 1977, p 145)	1.642	1.653	3.165	3.185
<b>1978</b>	Foreign reserve had been changed based to liquidity, guarantee, and profitability based to the environment change. The possibility of increasing currency exchange price and its interest rate impact choosing of foreign reserve adjusted: USD 12%, DEM 28%, JPY 20%, CHF 8%, FB 8% , ANG 8%, FF 5%, (SAR & KWD)5%, GBP 4%, other currencies 2% (CBJ annual report, 1978, p 128-130)	1.667	1.678	3.401	3.425
<b>1979</b>	<b>Not Issued</b>	1.516	1.525	3.378	3.401
<b>1980</b>	Many changes of currencies prices and interest rates that cause complex environment to explain fixed details for foreign reserve this year as to the changing by currencies exchange prices (CBJ annual report, 1980, p 114)	1.354	1.362	3.231	3.252
<b>1981</b>	Same problem as in 1980 year as to the changing by currencies exchange prices (CBJ annual report, 1981, p 131)	1.537	1.547	2.941	2.959
<b>1982</b>	Same problem as in 1980 & 1981 year as to the changing by currencies exchange prices but USD was increased in the foreign reserve to 24.1% as solution (CBJ annual report, 1983, p 114)	1.747	1.758	2.837	2.853
<b>1983</b>	Same problem as in 1980, 1981, 1982 year as to the changing by currencies exchange prices but USD was increased in the foreign reserve to 40.5% as solution to increase guarantee (CBJ annual report, 1983, p 114)	1.847	1.858	2.685	2.699

<b>1984</b>	Foreign reserve reduced as to sell by credit in the international market and to increase demand on the foreign currencies in Jordanian Market (CBJ annual report, 1984, p 111 -112)	2.119	2.132	2.463	2.475
<b>1985</b>	<b>Not issued</b>	1.881	1.896	2.708	2.731
<b>1086</b>	Many changing by currencies exchange prices and interest rate <b>cause the complex environment. Jordan link JOD exchange price with the</b> special drawing rights price based to 5 major foreign currencies(CBJ annual report, 1986, p 114)	1.971	1.983	2.898	2.915
<b>1987</b>	Many changing by currencies exchange prices and interest rate <b>and continue link with the</b> special drawing rights by price about (2.579) unit for every JOD unit with a margin of fluctuation based to basket of foreign currencies that have link with Jordan international trade(CBJ annual report, 1987, p 21)	1.618	1.628	3.030	3.049
<b>1988</b>	Reduced of foreign currencies in the Jordan market after high demand and increased the gap between JOD CBJ exchange price and the market exchange price that reduced it price (CBJ annual report, 1988, p 22)	1.158	1.164	2.092	2.101
<b>1989</b>	As to the increasing demand on the foreign exchange price CBJ cancel the link of credit service interest rate by Othman Murabaha margin to be more than 9% (CBJ annual report, 1989, p 22) and close currency exchange dealing organization except banks (CBJ annual report, 1989, p 24) and link JOD with major foreign currencies but USD was the almost basket weight based to the relation to international trading and Jordan relationship(CBJ annual report, 1989, p 25)	0.953	0.963	1.536	1.550
<b>1990</b>	JOD exchange price became just 1.4 USD and to solve the problem CBJ float the credit service interest rate(CBJ annual report, 1990, p 25)	0.782	0.786	1.499	1.508
<b>1991</b>	Strictness in currency exchange law to cancel the gap between foreign currencies exchange prices between CBJ and the Jordanian market beside the event of foreign reserve increased after the gulf crises because of increasing Jordanian transfer their foreign currencies to Jordan (CBJ annual report, 1991, p 5).	0.790	0.794	1.479	1.484
<b>1992</b>	There were concentrating on using the foreign reserve to import the Jordan needs based to performance measure to find the impact of changing foreign currencies on the investment with limit of size and price exchange even after foreign reserve increased after the gulf crises because of increasing Jordanian transfer their foreign currencies to Jordan(CBJ annual report, 1992, p 140)	0.953	0.958	1.445	1.449
<b>1993</b>	There were problem of reducing value of the CBJ foreign currencies and gold assets after evaluated by USD than evaluate by JOD as to the JOD price reduced (CBJ annual report, 1993, p 140)	0.955	0.960	1.418	1.422
<b>1994</b>	CBJ assets had been increased based to USD evaluation after its gold value increased about double beside the Jordan trade agreements with some countries(CBJ annual report, 1994, p	0.908	0.913	1.425	1.429



source: *Abbreviations are explained by appendences and see CBJ annual report (1972-1994) (Arabic copy) and see its site of statistics of JOD and currencies exchange price:*

<https://www.cbj.gov.jo/Pages/viewpage.aspx?pageID=67>, *it explain prices for DEM, FF and when it used EURO*

**Table 3: The Directions of major foreign currencies portfolio by CBJ after the year 1972 without explain CBJ the directions of dividing content of foreign reserve by weight**

By the end of Year	The Directions of major foreign currencies portfolio	JOD/GBP Average price		JOD/USD Average price	
		Buying	Selling	Buying	Selling
<b>1995</b>	In 22/10/1995 JOD is linked by USD by the middle price. Every USD unit= 0.709 JOD unit. It Just fixed with USD(CBJ annual report, 1995, p 51) then the JOD become currency for transferring (CBJ annual report, 1995, p 55)	0.907	0.911	1.408	1.412
<b>1996</b>	Continue the link with USD and JOD increased when USD increased or reduced when USD reduced and to increase Jordanian foreign reserve, (CBJ annual report, 1996, p 55, 123-124)	0.832	0.837	1.408	1.412
<b>1997</b>	As to link JOD with USD, there were official price. JOD had selling price = 0.710 JOD to buy 1 USD and had buying price by 0.709 JOD to buy 1 USD(CBJ annual report, 1997, p 55&58) Jordan got in correcting economic programs and partly import by selling goods with goods(CBJ annual report, 1997, p 57)	0.848	0.853	1.408	1.412
<b>1998</b>	Jordanian foreign reserve reduced as to increased demand for buying foreign currencies while there were continue of JOD link with USD(CBJ annual report, 1998, p 51)	0.845	0.849	1.408	1.412
<b>1999</b>	Foreign reserve increased than 1998 and continue JOD link with USD <u>beside concentrated on the measure of Jordan import cover by the foreign currencies after evaluated by USD</u> . It was 7.1 months (CBJ annual report, 1999, p 2 &25)	0.869	0.873	1.408	1.412
<b>2000</b>	Continue link JOD with USD (CBJ annual report, 2000, p29) Foreign reserve increased than 1999 and foreign currencies can cover Jordan import for 8.7 months(CBJ annual report, 2000, p 1&30)	0.956	0.961	1.408	1.412
<b>2001</b>	Continue link JOD with USD and foreign reserve reduced than 2000 and foreign currencies can cover Jordan import more than 7 months(CBJ annual report, 2001, p 24)	0.970	0.974	1.408	1.412
<b>2002</b>	Continue link JOD with USD and foreign reserve increased than 2001 and foreign currencies can cover Jordan import more than 7 months(CBJ annual report, 2002, p 25)	0.877	0.882	1.408	1.412
<b>2003</b>	Continue link JOD with USD and foreign reserve increased than 2002 and foreign currencies can cover Jordan import	0.790	0.794	1.408	1.412

	more than 9 months(CBJ annual report, 2003, p 22)				
<b>2004</b>	Continue link JOD with USD and foreign reserve reduced than 2003 and foreign currencies can cover Jordan import for 7 months(CBJ annual report, 2004, p 24)	0.733	0.737	1.408	1.412
<b>2005</b>	Continue link JOD with USD and foreign reserve reduced than 2004 and foreign currencies can cover Jordan import for 5 months(CBJ annual report, 2005, p 24)	0.816	0.820	1.408	1.412
<b>2006</b>	Continue link JOD with USD and foreign reserve increased than 2005 and foreign currencies can cover Jordan import for 6 months(CBJ annual report, 2006, p 30)	0.718	0.722	1.408	1.412
<b>2007</b>	Continue link JOD with USD and foreign currencies can cover Jordan import for 6 months(CBJ annual report, 2007, p 28)	0.704	0.708	1.408	1.412
<b>2008</b>	Continue link JOD with USD and there were reduced of foreign reserve and foreign currencies can cover Jordan import for 5 months(CBJ annual report, 2008, p 28)	0.974	0.979	1.408	1.412
<b>2009</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 7 months(CBJ annual report, 2009, p 28)	0.875	0.879	1.408	1.412
<b>2010</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 8 months(CBJ annual report, 2010, p 30)	0.907	0.911	1.408	1.412
<b>2011</b>	Continue link JOD with USD and there were reduced of foreign reserve and foreign currencies can cover Jordan import for 6.2 months(CBJ annual report, 2011, p 28)	0.910	0.915	1.408	1.412
<b>2012</b>	Continue link JOD with USD and there were reduced of foreign reserve and foreign currencies can cover Jordan import for 3.7 months as to energy crises(CBJ annual report, 2012, p 28)	0.871	0.875	1.408	1.412
<b>2013</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 6.2 months(CBJ annual report, 2013, p 25)	0.854	0.858	1.408	1.412
<b>2014</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 7 months(CBJ annual report, 2014, p 23)	0.904	0.909	1.408	1.412
<b>2015</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 7.8 months(CBJ annual report, 2015, p 27)	0.949	0.954	1.408	1.412
<b>2016</b>	Continue link JOD with USD and there were reduced of foreign reserve than 2015 with accepted standard of covering Jordan import (CBJ annual report, 2016, p 27)	1.149	1.155	1.408	1.412
<b>2017</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 8 months(CBJ annual report, 2017, p 27)	1.041	1.046	1.408	1.412

<b>2018</b>	Continue link JOD with USD and there were reduced of foreign reserve and foreign currencies can cover Jordan import more than 7 months(CBJ annual report, 2018, p 31)	1.109	1.114	1.408	1.412
<b>2019</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 8 months(CBJ annual report, 2019, p 32)	1.073	1.078	1.408	1.412
<b>2020</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 9.2 months(CBJ annual report, 2020, p 31)	1.033	1.038	1.408	1.412
<b>2021</b>	Continue link JOD with USD and there were increased of foreign reserve and foreign currencies can cover Jordan import for 9.5 months(CBJ annual report, 2021, p 39)	1.044	1.049	1.408	1.412
<b>2022</b>	Continue link JOD with USD and there were reduced of foreign reserve and foreign currencies can cover Jordan import for 7.4 months(CBJ annual report, 2022, p 38)			1.408	1.412

*sources: Abbreviations are explained by appendences and see CBJ annual report in (1995- 2022) (Arabic copy) and see the site of statistics the JOD and currencies exchange prices in <https://www.cbj.gov.jo/Pages/viewpage.aspx?pageID=6>*

### 3. RESULTS AND DISCUSSION

JOD not full covered by gold ounce weight in a direct way. In 1964, one JOD can be changed by one GBP as bank note because all the cover was by GBP. After that, JOD covered by portfolio of foreign currencies more than gold. Every foreign currency had equivalent prices with fixed amount of gold ounce weight with flexibility of change the weight of gold except USD. Every 35 USD equal one gold ounce weight science 1934 until 1971(Annashmi, 1988, 269). Gold dealing still not became with free prices as goods.

The result: H1 is not accepted because JOD price is change in 1990 and always has change of its value based to accepted the international standards of the foreign reserve for liquidity, guarantee, and profitability. This changing of value is done by major foreign currencies countries to manage its balance payments without linking with gold cover as before 1970 and transfer evaluation from gold cover to strength standards of economic and social. Even JOD link with USD is showing the change of JOD exchange based to USD exchange increased or decreased by the U.S federal bank.

#### **First: By discuss Jordanian foreign reserve standard:**

**Table 4: Impact of JOD link by USD of Jordan credit, debt, import, using JOD, and gold price**

<b>Impact of JOD link by USD</b>	<b>When USD exchange price increases</b>	<b>When USD exchange price reduces</b>
<b>On Jordan Credit</b>	If the credit by USD it will be fixed but if it by other currencies as GBP or Euro it will be reduced	If the credit by USD it will be fixed but if it by other currencies as GBP or Euro it will be increased
<b>On Jordan debt</b>	If the debt by USD it will be fixed but if it by other currencies as GBP or Euro it will be reduced	If the debt by USD it will be fixed but if it by other currencies as GBP or Euro it will be increased

<b>On Jordan import</b>	If the import by USD it will be fixed but if it by other currencies as GBP or Euro it will be reduced	If the import by USD it will be fixed but if it by other currencies as GBP or Euro it will be increased
<b>Using JOD</b>	Not used in the international markets. It just used in Jordanian Markets JOD is a financial broke with margin profit to collect foreign currencies	Not used in the international markets. It just used in Jordanian Markets JOD is a financial broke with margin profit to collect foreign currencies
<b>Gold pricing</b>	The gold price reduced in short term but gold is increasing by long term.	The gold is increased by short term and more increasing by long term.

source: by authors

Jordan standards as developing country was concentrated on the major foreign currencies basket in Jordanian foreign reserves when every currency unit was equivalent with gold until 1972 this cause was showing a stability, then standard concentrate on Jordanian foreign reserve basket based to every major foreign currency value as to the issuer economic factors strength and social factors strength and evaluate the basket by USD (Jordanian central bank annual report, 1971, p72), after that the standard of Jordanian foreign reserve becomes Just to cover Jordan import for more than 3 months (Jordanian central bank annual report, 1999, p2). It is showing the changing of value measurement based. It meets the study result for Chami et al, (2007)

**Second: By discuss the JOD link with USD in 1995 until now:**

USD power comes from having the first level of economic round the world, therefore, it becomes standard of economic factors strength and social factors strength round the world. Power to control factors comes by USA producing and reserves of goods, gold, and foreign currencies that impact factors to increase USD price or reduce USD price also comes from following USA monetary policy as to dollarization by countries because of using USD as official currency beside the local currency. Many countries link its local currency with USD. Almost countries used USD in its foreign reserves to get guarantee, liquidity, and profitability. USD is the way to evaluate Central banks assets value. On other hand, JOD link by USD cause inertia of Jordanian monetary policy as to the study result for Sweidan, (2011) because JOD price and control is impacted by USD change in credit, debt, import, Using of JOD, and gold pricing. Table (5) shows USD exchange changing in short term.

**Table 5: USD exchange price with other major foreign currencies within 2023 (short term)**

The result	Q4/23 middle price	The result	Q3/24 middle price	The result	Q2/24 middle price	Q1/24 middle price	Currently Price	<u>USD currencies exchange</u>
USD in Q4 reduced than Q3	147.204	USD in Q3 increased than Q2	155.202	USD in Q2 increased than Q1	152.498	149.822	146.264	<u>USD/JPY</u>
USD in Q4 reduced	7.24603	USD in Q3 increased	7.43711	USD in Q2 increased	7.37246	7.30924	7.18828	<u>USD/CNY</u>

than Q3		than Q2		than Q1				
USD in Q4 reduced than Q3	1.37164	USD in Q3 increased than Q2	1.41360	USD in Q2 increased than Q1	1.39947	1.38549	1.35830	<u>USD/CAD</u>
USD in Q4 reduced than Q3	0.64600	USD in Q3 increased than Q2	0.61153	USD in Q2 increased than Q1	0.62284	0.63429	0.65641	<u>AUD/USD</u>
USD in Q4 reduced than Q3	1.06297	USD in Q3 increased than Q2	1.02488	USD in Q2 increased than Q1	1.03736	1.05006	1.07661	<u>EUR/USD</u>
USD in Q4 reduced than Q3	1.23737	USD in Q3 increased than Q2	1.18681	USD in Q2 increased than Q1	1.20350	1.22031	1.25873	<u>GBP/USD</u>
USD in Q4 reduced than Q3	0.89149	USD in Q3 increased than Q2	0.92669	USD in Q2 increased than Q1	0.91481	0.90311	0.87986	<u>USD/CHF</u>
	0.71087		0.71406		0.71299	0.71193	0.70880	<u>USD/JOD</u>
USD in Q4 reduced than Q3	29.5933	USD in Q3 increased than Q2	31.5345	USD in Q2 increased than Q1	30.8739	30.2278	28.9918	<u>USD/TRY</u>

*source: by authors depend on the prices from <https://tradingeconomics.com/countrycurrencies> and the comment of results from searchers*

**Third: By discuss the controlling of value changings in Jordanian foreign reserves:**

There is complex environment impact the value. The (USD/gold) changes for short term and changes by long term more and more. Also, there is changing of USD exchange price and other major foreign currencies for short term and long term but changing is not follow the (USD/gold) price changing for long term. Gold value increased about 5700%, gold price change, see table (6)

**Table 6: Gold ounce prices yearly during 1964-2023 to find (USD/gold) changes**

Year	Ounce price	Year	Ounce price	Year	Ounce price
1964	35.10	1991	362.1	2018	1260,39
1965	35.12	1992	343.82	2019	1393..34
1966	35.13	1993	359.77	2020	1773.73
1967	34.95	1994	384.00	2021	1798.89
1968	39.31	1995	383.79	2022	1801.89
1969	40.28	1996	387.81	2023	1941.47

1970	36.02	1997	331.02
1971	40.62	1998	294.24
1972	58.42	1999	278.98
1973	97.39	2000	279.11
1974	154.00	2001	271.04
1975	160.85	2002	309.73
1976	124.74	2003	363.38
1977	147.84	2004	409.72
1978	193.40	2005	444.74
1979	306.00	2006	603.46
1980	615.00	2007	695.39
1981	460.00	2008	871.96
1982	376.00	2009	972.35
1983	424.00	2010	1224.53
1984	361.00	2011	1571.52
1985	317.00	2012	1668.98
1986	368.00	2013	1411.23
1987	447.00	2014	1266.40
1988	437.00	2015	1160.60
1989	381.00	2016	1250.74
1990	383.57	2017	1265.39

source: [https://nma.org/wp-content/uploads/2016/09/historic\\_gold\\_prices\\_1833\\_pres.pdf](https://nma.org/wp-content/uploads/2016/09/historic_gold_prices_1833_pres.pdf) prices before 1995, World Gold Council, taken from Timothy Green's historical gold price table, London prices converted to U.S. Dollars. While prices from 1995-2016, Kitco.com based on London PM flx. 2017-2023 from the site: <https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart>

On other hand, the major foreign currencies in the foreign reserve show change of prices in long term to impact JOD guarantee, liquidity, and profitability to give a changed value, see figures 2-6:

**Fig 2: USD/CHF historical data (long term)**



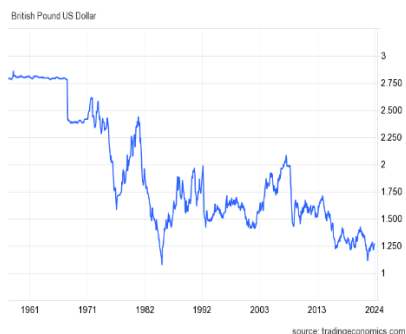
source: <https://tradingeconomics.com/switzerland/currency>

**Fig 3: EURO/USD historical data (long term)**



source: <https://tradingeconomics.com/euro-area/currency>

**Fig 4: GBP/USD historical data (long term)**



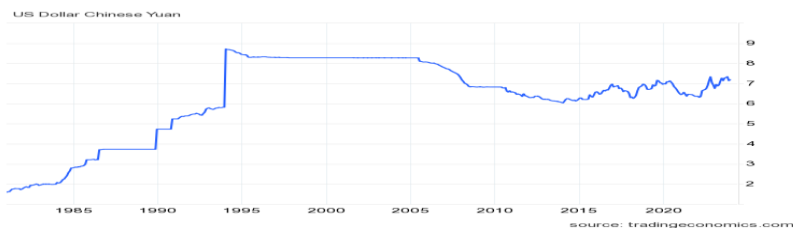
source: <https://tradingeconomics.com/united-kingdom/currency>

**Fig 5: USD/JYP historical data (long term)**



source: <https://tradingeconomics.com/japan/currency>

**Fig 6: USD/CNY historical study (long term)**



Source: <https://tradingeconomics.com/china/currency>

**Forth: By study foreign exchange reserve to amount of money**

Money in M0, M1, and M2 amount is more than foreign exchange reserve for JOD and USD.

**Table 7: comparing by foreign currencies reserve and M0, M1, and M2 between Jordan and USA**

Countries	USD		Jordan	
	Last	Previous	last	Previous
Foreign exchange reserve	36303 Million USD	35214 Million USD in 23/ Nov/2023	13942 Million JOD	14225 Million JOD in 23/Nov/2023
M0	5731400 Billion USD	5601300 Billion USD in 23/ Nov/2023	-	-
M1	18046 Billion USD	18081 Billion USD in 23/ Nov/2023	12589 Million JOD	12769 Million JOD in 23/Oct/2023
M2	20767 Billion USD	20726 Billion USD in 23/ Nov/2023	42355 Million JOD	42345 Million JOD in 23/Oct/2023

source: <https://tradingeconomics.com/united-states/indicators> and <https://tradingeconomics.com/jordan/indicators>

This table shows the accepted result for Al-Assaf (2017) as money supply more than Foreign exchange reserve that show more risk of JOD exchange price. As Money supply means more liquidity by banks and financial organization by loan with float interest rate by law, it led to increasing cost of living and feel that JOD is not value as last years. Because customers interest rate reach to more than 40 yearly. While, microfinance companies pricing as traditional institutes reach 40% yearly as result to deal without strict guarantees (Partners Microfinance Company, 2022). Jordan cancel the Osman Murabaha margin which equal 9% as interest rate (CBJ annual report , 1990, p25) Losing trust of currencies value is supported by effect of time value of money based to increasing interest rate (Rahmani & Ibn Ibrahim, 2012, p227). On other hand there is summary in IMF that Jordan assessment against the fiscal transparency code showed guarantee problem in 2021 (Allen et al, Oct/2021, P 8, 10 & 59). "Fitch Ratings has affirmed Jordan's Long-Term Foreign-Currency Issuer Default Rating (IDR) at 'BB-' with a Stable Outlook (Fitch Rating, Nov/2023). Business efficiency of finance was ranking 53 in 2023 (Caballero & Pisti. 2023). Jordan government used SDR to reduce general budget deficient instead of investing SDR by CBJ assets and there is a need to explain that to public (Awad & Sting, 2023, P17-18)

**4. The Conclusion and Recommendation**

H1 is not accepted for long term because of the following:

The result shows that JOD is not a fixed measurement for things value in long term because of international standards changings. These changing caused loss of gold dealing to buy things and reduce Jordanian foreign currencies value, such as every gold ounce was equal 35 USD at time of building the Jordanian foreign reserve in 1964 but currently every ounce equal 2053.1 USD as in 25/12/2023. The changing is continues impacting accepted levels of guarantee and liquidity because of foreign currencies using floating prices to manage their countries balance of payment. By comparing with the during (1964- 1987). the international standards are changed by time and CBJ apply the directions except the problem of reducing JOD price from about 3 USD to 1.4 USD in



1987 without historical adjusted to make JOD back to 3 USD, therefore, JOD has now about 1/2 of its store value. Now CBJ is applying the standard for developing countries by cover import for more than 3 months.

There is a suggestion to increase local producing to covering local needs and to reduce pay by foreign currencies beside reduce deficient in the general budget, then to buy goods with goods after that to increase foreign reserve with gold to increase guarantee of JOD power because gold is store of value.

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## 6. Appendices Table:

Table1: currencies abbreviations in this study

ABBREVIATION	COUNTRY CURRENCY	ABBREVIATION	COUNTRY CURRENCY
JOD	Jordan Dinar	AUD	Australia Dollar
DEM(EURO)	German Mark	GBP	Great Britain Pound
ITL (EURO)	Italy Lira	EUR	Euro
FF (EURO)	French Franc	JPY	Japan Yen
FB (EURO)	Dutch Guilder	CHF	Switzerland Franc
CAD	Canada Dollar	USD	USA Dollar
BEF	Belgian Franc		
SAR	Saudi Arabia Riyal		
KWD	Kuwait Dinar		