Measuring Financial Discipline Using the Budget Deficit Index in Iraq For (2005-2020)

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Abstract

One of the main ways that can be used as an indicator of the state of the presence or absence of financial discipline in the economy of any country, as well as understanding its economic reality and the strengths and weaknesses of that economy is the budget deficit indicator, and financial discipline is one of the basic measures to reach financial stability and financial sustainability at both levels. Global and local, and Iraq, as one of the developing countries, suffers from the problem of the budget deficit in its multiple dimensions, both internally and externally, in light of the increasing imbalance in its financial and economic system, which reveals the decline in the financing role on the one hand, On the other hand, it reveals how financing and spending are based on financial discipline, and based on this, it is possible to seek to analyze and measure the financial discipline equation for the period under study (2005-2020) in the Iraqi economy, as this indicator is the best in expressing the financial situation For the economy, it reflects the financial imbalance resulting from the imbalance in the structure of the general budget of Iraq in light of an economy that lacks the diversity of sources of public revenues for the state and the resulting negative effects on the public budget as well as the effects on economic variables.

Keywords : Financial discipline, Budget deficit, Public expenditure, Public debt.

INTRODUCTION

Financial discipline has become a mainstay for countries that continuously suffer from deficits in their public budgets. That is why most developing countries in general and Iraq in particular have turned to trying to control spending. This research came to shed light on the trends of financial discipline in Iraq after 2005, as Iraq is considered Among the countries with rentier economies that suffer from economic instability and accumulated debts in light of the need for high expenditures to rebuild the infrastructure that was exhausted by the difficult conditions, wars and change in its political and economic system after 2003.

First: Analysis of the Iraqi budget deficit indicator to show changes in fiscal discipline for the period (2005-2020)

1. The concept of financial discipline: Financial discipline is defined as the government's ability and ability to overcome the risks that threaten the safety and security of its financial operations in the long term. Financial discipline has two main characteristics :

• The first: financial discipline is seen through the study of budgets for multiple years, meaning that discipline is not measured at the level of the budget of one year only, but extends for many consecutive years.

• Second: Financial discipline is a mechanism for achieving financial stability and a mechanism for maintaining the safety and integrity of the state's public finances during economic cycles.

2. The concept of budget deficit: The deficit is defined as the revenue that the government obtains that is less than its expenditures, that is, the deficit represents the difference that the government must save, or the situation in which saving is negative, so when the government suffers from a budget deficit (spending is higher than Income) , it must

provide the funds necessary to cover that deficit or part of it, whether through borrowing or other available sources of funding, and the budget deficit is an annual concept, that is, it represents the balance of income and expenditures during a year, and the budget deficit means the inability of the state to Its public revenue exceeds its public expenditure , and the annual government deficit simultaneously accumulates with the other measured variables, because the annual deficit is (twelve-month income minus the sum of all expenditures for the same period) .

3. Analysis of changes in fiscal discipline through the budget deficit index for the period (2005-2020) The general formula of the equation for measuring financial discipline through the budget deficit indicator can be clarified as follows :

$$\Delta BD = \Delta MB + \Delta D - e\Delta R - \Delta T$$

Since:

ΔBD / refers to the annual change of the public budget deficit in Iraq, which reflects the size of fiscal discipline.

ΔMB / represents the change in the monetary base, which is a sum $(C + R)$, the sum of the cash leakage amounts in addition to the total cash reserve ratios (mandatory reserves with the Central Bank, surplus reserves with commercial banks, legal reserves on time deposits).

ΔD/ represents the change in total public debt.

R / is the exchange rate (e) multiplied by the changes in cash reserves.

Through the above equation, we can be guided that achieving financial discipline must be done through coordination between the fiscal and monetary policies, and it is obvious that the central bank can buy the bonds issued by the government and thus increase the public debt (ΔD), and therefore the reference is positive for this The variable in the formula for calculating financial discipline through this indicator, and since the budget deficit is financed by one of the financing methods such as internal or external borrowing, withdrawal of cash reserves from foreign currencies, or financing the deficit through the new and last monetary issuance leads to the expansion of the monetary base, so The relationship between the monetary base (ΔMB) and the budget deficit is positive in this indicator, which reflects the size of fiscal discipline, and if the government borrows from foreign currency reserves (ΔR) for the purpose of financing the deficit in the general budget, this leads to a decrease in those reserves, which leads To the decrease in the exchange rate of the local currency against foreign currencies (e), and this explains the negative relationship of these two variables in this indicator, and if the government seeks to achieve financial discipline, it must Fiscal policy by raising the amount of taxes, which plays a major role in covering part of public expenditures. In other words, higher taxes lead to a decrease in the proportion of the budget deficit, and this explains the inverse or negative relationship to the change in the size of taxes in the budget deficit index when measuring the size of fiscal discipline.

Table (1) *Analysis of the financial discipline equation variables for the period under study (2005-2020) (million dinars)*

Years	Change in financial discipline ΔBD	Change in the monetary base ΔMB*	Change in total public debt ΔD*	The exchange rate of the local currency against the US dollar e	Change in foreign currency reserves ΔR*	The product of the exchange rate multiplied by the change in cash reserves eΔR	Change in taxes ΔT
2005.	———	———	———	1472	———	———	———
2006.	(1,269,404,144)	3,726,000	(53,623,395)	1475	8,572,236	1,264,404,810	95,947
2007.	(1,475,092,761)	11,287,000	(2,115,860)	1267	11,649,141	1,475,946,165	637,107
2008.	(2,466,544,567)	14,051,000	(17,548,647)	1203	20,500,574	2,466,219,052	(242,499)
2009.	8,094,425,793	2,411,000	3,020,589	1182	(6,845,468)	(8,091,343,176)	2,348,972

2010.	(8,721,555,980)	8,540,000	(7,610,005)	1186	7,356,061	8,724,288,346	(1,802,371)
2011.	(1,456,117,445)	4,888,000	3,908,549	1196	12,182,040	1,456,971,984	251,155
2012.	(1,305,307,547)	4,693,000	1,038,328	1233	10,590,395	1,305,795,704	849,764
2013.	(1,064,581,399)	9,868,000	(2,025,258)	1232	8,647,251	1,065,341,323	243,499
2014.	1,751,444,096	(7,028,000)	(402,958)	1214	(14,432,356)	(1,752,088,018)	(991,729)
2015.	1,538,715,07	(8,343,000)	23,889,502	1247	(12,326,972)	(1,537,173,408)	129,883
2016.	1,319,090,048	4,703,000	7,202,744	1275	(10,337,915)	(1.318,084,163)	1,846,886
2017.	(6,043,817,532)	3,100,000	11,127,026	1258	4,813,679	6,055,608,182	2,436,376
2018.	(2,185,531,948)	1,470,000	45,075,799	1209	18,116,193	2,190,247,734	(612,064)
2019.	(4,667,096,706)	11,092,000	(12,219,226)	1196	3,902,710	4,667,641,160	(1,671,680)
2020.	1,907,551,338	10,608,000	(52,728,148)	1234	(1,495,072)	(1,844,918,848)	703,658

Reference: Prepared by researchers based on:

 Central Bank of Iraq, Directorate General of Statistics and Research, Annual Statistical Bulletin, different years.

 Data of the Ministry of Finance, Public Debt Department, Ministry of Planning, different years.

 The brackets in the table above indicate the negative sign.

 See Appendix (1), (2), (3), for data on changes in (ΔMB), (ΔD), (ΔR).

Note from the data of the above table that financial discipline when calculating and analyzing it according to the budget deficit index that was previously clarified that the fiscal and monetary policies in Iraq were not able to achieve financial discipline in most years for the period under study (2005-2020), and this indicates the inability of these two policies On the one hand, control spending and on the other hand, follow an expansionary fiscal policy that relies heavily on public debt to finance the budget deficit. A direct impact is affected by any change in the equation variables as a whole or the change independently of one of the studied economic variables, which is evidence that financial discipline can only be achieved through convergence and appropriateness between the directions of monetary policy and fiscal policy together. When looking at the changes of financial discipline, we find that it has achieved Negative results from 2006, in which a negative amount amounted to (1,269,404,144) million dinars, until 2008, in which financial discipline recorded a negative amount of (- (2,466,544,567) million) dinars.

The reason for the deterioration in the changes in fiscal discipline according to the deficit index was the expansion of spending for the reconstruction of Iraq and the infrastructure, most of which were destroyed as a result of the wars that the country went through. Then, in 2009, Iraqi economic policies were able to achieve a positive change in the volume of fiscal discipline as a result of the rise in oil prices in Global markets, as it recorded (8,094,425,793) million Iraqi dinars, which is the highest amount of financial discipline that Iraq was able to achieve during the study period (2005-2020), and financial discipline soon resumed its inclusion, achieving the highest negative amount during the study period, as it recorded in 2010 a negative change of (- 8,721,555,980) million as a result of the deterioration in oil prices and the effects of the global crisis that occurred in 2008, not only on the Iraqi economy, but on the entire global economy.

The Iraqi government corrected the situation and was able to reduce this deterioration. Indeed, the volume of negative amounts of financial discipline decreased, but it continued to record negative changes until 2013, recording the lowest negative volume during the period under study, reaching (-1,064,581,399) million dinars, after that, specifically in the year 2014 and after the entry of the terrorist organization ISIS to some Iraqi provinces and Iraq's need to increase its military expenditures Iraq submitted a request for a loan of (five

billion dollars) to the International Monetary Fund, and then the IMF imposed restrictions on the Iraqi government as a result of an agreement concluded between the International Monetary Fund mission to monitor the performance of those in charge of managing financial and monetary policy in Iraq and submit proposals that would enhance financial discipline and control public spending The two parties reached an agreement at the level of the staff of the International Monetary Fund mission headed by (Christian Goose) on a strong action plan called (Small Marketing Force Plan), which stipulates that the Iraqi authorities implement financial discipline from It would contain public spending with the available revenues and available financing, and this agreement aims to reduce the primary deficit of the non-oil sectors. The agreement also included taking measures to enhance the management and stability of the financial sector by combating money laundering and terrorist financing, provided that the results are presented by the year 2017. 2014 to the end of 2016 .

The results of this were that Iraq was able to achieve financial discipline during the aforementioned three years until the change in financial discipline recorded an amount of (1,319,090,048) in the year 2016. And a decrease until 2019, and as a result of the spending cuts and the increase in the percentage of taxes on incomes, fiscal discipline returned to record a positive amount in the year 2020, amounting to (1,907,551,338) million dinars. to show its effects.

Second: Measuring the effect of some economic variables on financial discipline using the Autoregressive Model of Distributed Time Deceleration (ARDL)

1. Variable stability test

Testing the stability of the study variables using Eviews12.12 program and perform the expanded Dickey Fuller test (ADF) in order to find out whether the variables are stable or unstable, that is, they contain a unit root with determining the order of integration, and after conducting the test for the variables, we obtained the outputs shown in Table 2:

Table (2) *Extended Dickey-Fuller and Phillips-Beron Unit Root Test*

Variable	Integration rank	Level			First difference		
		Non	B	A	Non	B	A
I(0)	BD				-2.25*	-5.81*	-4.87*
I(1)	D	-5.19*	-5.09*	-6.007*	-2.45*	-2.41	-1.82
I(0)	Ex				-1.15	-4.25*	-4.10*
I(1)	MB	-5.65*	-5.51*	-5.43*	-1.76	-2.37	-2.33
I(1)	R	-5.21*	-5.15*	-5.03*	-2.75*	-2.34	-2.44
I(1)	T				-3.83*	-4.53*	-3.69*

The source was prepared by the researcher based on the outputs of the Eviews12 program. 12

A means the regression contains transversal and general direction, B means the regression contains only transversal, Non means the regression contains neither transversal nor general direction.

 * Mean significant at the 5% level of significance.

We note from Table (2) that the time series of the variables (BDΔ), (ExΔ), (TΔ), were stable at the level (Leve l) whether with a secant or with a secant and a general trend, meaning

that they are free from a unit root and do not contain a false regression, It is stable at a significant level (5% and 10%) and will be integrated of degree I(0), while the rest of the variables represented by De)Δ, (MbΔ), (RΔ) were unstable, so the test was conducted after taking the first differences (First - difference) of the original series and it was found that they are stable at a significant level (5% and 10%) and will be integral of degree I(1), whether in the presence of a secant or in the presence of a secant and a general trend.

2. Estimating the function of the change in the public budget deficit

1- Estimating the function using the Autoregressive Distributed Deceleration (ARDL) model: After estimating the ARDL model for the function of the change in the public budget deficit with two slowdown periods (2), we obtained the results shown in Table (3).

Table (3) *Results of the ARDL model for the function of change in the public budget deficit*

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
BD(-1)	0.128723	0.164397	0.782999	0.4502
BD(-2)	-0.862244	0.128525	-6.708764	0.0000
DE	-57.65783	42.93950	-1.342769	0.2064
DE(-1)	-8.144654	61.66075	-0.132088	0.8973
DE(-2)	-141.4184	43.46932	-3.253293	0.0077
EEX	25352938	15075189	1.681766	0.1208
EEX(-1)	9040777.	20501318	0.440985	0.6678
EEX(-2)	-37448520	12751280	-2.936844	0.0135
RR	-282.5492	75.59701	-3.737572	0.0033
RR(-1)	12.49135	115.3514	0.108290	0.9157
RR(-2)	246.4152	90.11633	2.734412	0.0194
T	915.6279	390.6064	2.344119	0.0389
T(-1)	-114.2309	537.4579	-0.212539	0.8356
T(-2)	2051.644	526.6253	3.895833	0.0025
MB	-131.3454	117.8051	-1.114938	0.2886
MB(-1)	48.23749	147.8150	0.326337	0.7503
MB(-2)	-540.8251	123.5660	-4.376814	0.0011
R-squared	0.96	Adjusted R-squared		0.92
F-statistic Probability	15.14 (0.000)	Durbin-Watson stat		1.77

The researcher based on the outputs of the Eviews12 program.

We note from the aforementioned table that shows the results of estimating the ARDL model, as the explanatory power of the estimated model was (R2 = 0.96), that is, the independent variables included in the estimated model explain 96% of the changes that occurred in the dependent variable) and the value of Adjusted R-squared was (0.92) We also note that the model is significant, as the calculated F value was 15.14)) which is significant at the 5% level, meaning that the estimated model is significant, i.e. we reject the null hypothesis (H0: B = 0) and accept the alternative hypothesis (H1: B ≠ 0)).

2- Bounds Test: The results of the bounds test show that the calculated F-statistics value was greater than the (maximum tabular F) of (3.34) at the level of significance (5%), and accordingly we will reject the null hypothesis and accept the alternative hypothesis in the sense that there is A long-term equilibrium relationship between the dependent variable and the independent variables.

Table (4) *Bounds Test of the estimated model of the function of change in the public budget deficit*

Test Stat.	Value	K
F- Stat	15.14	5
Signi.	I(0) Bound	I(1) Bound
%10	1.81	2.93
%5	2.14	3.34
%2.5	2.44	3.71
%1	2.82	4.21

☐ The researcher based on the outputs of the Eviews12 program.

3- Test the problem of autocorrelation and heterogeneity of variance: to make sure that the estimated model is free of the problem of serial correlation using the Breusch-Godfrey Serial Correlation LM Test)) as well as the test of heterogeneity of variance, through the data in Table (5). We note that the estimated model is free of serial correlation, meaning We accept the null hypothesis that there is no serial correlation between the residuals, and the reason for this is that the value of the (F) and (Chi-Square) test is not significant at the 5% level of significance. Therefore, we reject the alternative hypothesis of the existence of a serial correlation, and it is also clear that the model is free from the problem of heterogeneity The variance because the statistical indicators were also not significant, and this means that the variance of errors is homogeneous.

Table (5) *Test the serial correlation and heterogeneity of variance of the function of change in the public budget deficit*

Breusch-Godfrey Serial Correlation LM Test			
F- statistic	0.0085	**Prop . F**	**0.9280**
Obs*R-squared	0.0240	**Prob. Chi-Square**	0.8768
		Heteroskedasticity Test: Glejser	
F-statistic	2.0741	**Prob. F**	0.1208
Obs*R-squared	21.813	**Prob. Chi-Square**	0.1920
Scaled explained SS	7.5973	**Prob. Chi-Square**	0.9744
Ramsey RESET Test			
t-statistic	1.120629	**Prob T**	0.2886
F-statistic	1.255810	**Prob F**	0.2886
Likelihood ratio	3.312381	**Prob Likelihood ratio**	0.0688

☐ The researcher based on the outputs of Eviews 12

4- Autocorrelation test:

Table (6) *testing the existence of autocorrelation of the function of change in the public budget deficit*

Q-statistic probabilities adjusted for 2 dynamic regressors						
Prob *	**Q-Stat**	**PAC**	**AC**		**Partial Correlation**	**Autocorrelation**
0.826	0.0484	-0.039	-0.039	1	. | . |	. | . |
0.217	3.0529	-0.307	-0.305	2	.**| . |	.**| . |
0.269	3.9296	0.148	0.162	3	. |* . |	. |* . |
0.387	4.1458	-0.007	0.079	4	. | . |	. |* . |
0.520	4.2068	0.060	-0.041	5	. | . |	. | . |
0.555	4.9125	0.152	0.136	6	. |* . |	. |* . |
0.669	4.9233	0.015	0.016	7	. | . |	. | . |
0.687	5.6459	-0.058	-0.131	8	. | . |	.*| . |
0.672	6.6620	-0.224	-0.152	9	.**| . |	.*| . |
0.755	6.6821	-0.127	-0.021	10	.*| . |	. | . |
0.798	7.0175	-0.007	0.082	11	. | . |	. |* . |

| 0.800 | 7.8085 | -0.137 | -0.123 | 1 2 | . *| . | | . *| . | |

| *Probabilities may not be valid for this equation specification. |

Through table (6) we can notice that the model is free of autocorrelation because the value of Q-stat is not significant at the 5% level, and accordingly we will accept the null hypothesis in the sense that there is no autocorrelation between the residuals and reject the alternative hypothesis.

5- Structural stability test for short- and long-term transactions: After estimating the error correction formula for the ARDL model, it is necessary to conduct a structural stability test for short- and long-term transactions of the budget deficit change function model to ensure that the data used is free of any structural changes in it, and this is done through two tests: :-

a. Cumulative Residual Residual Test (CUSUM)

b. Test the cumulative sum of squares of recurring residuals (CUSUM SQ) as in the following figure: -

Figure1
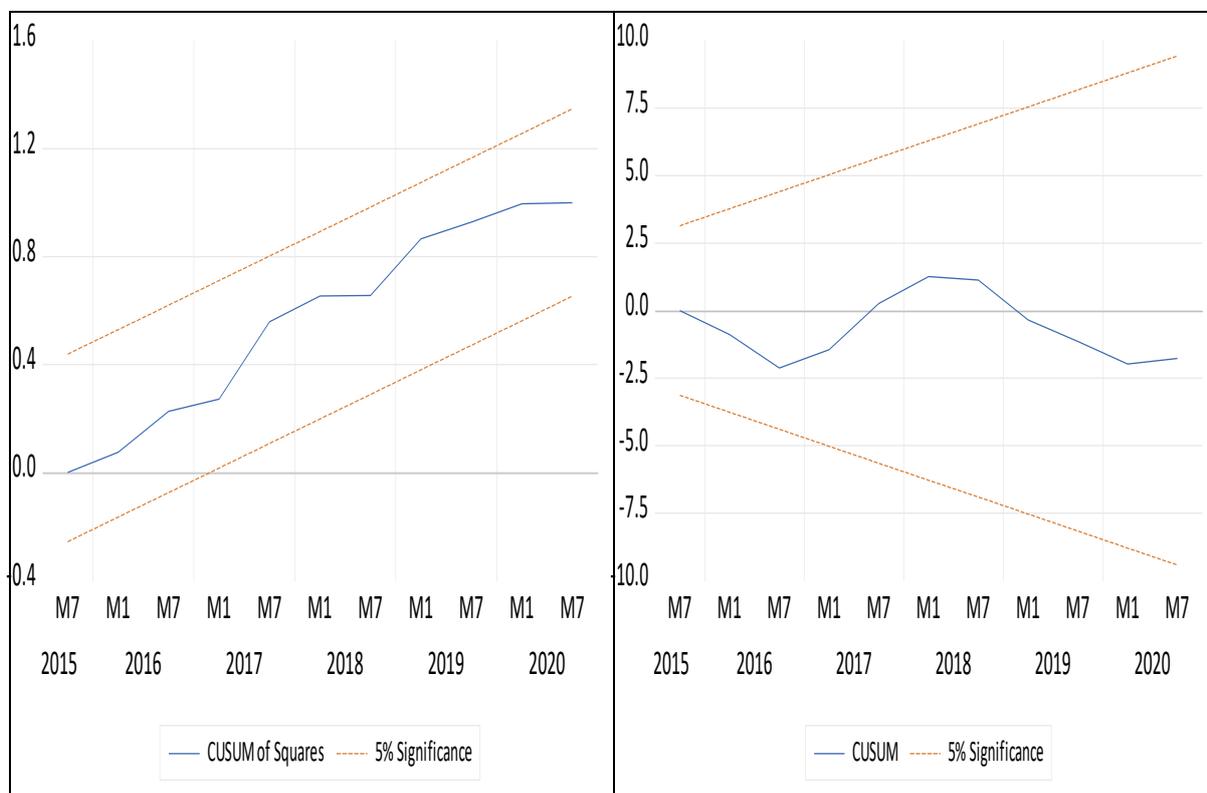
The researcher based on the outputs of the Eviews12 program

It is noted from the above figure that the cumulative sum of residual residuals (CUSUM) test statistics fell within the critical limits (the upper and lower bounds) at the level of significance of 5%, which means that the estimated coefficients of the unconstrained error correction model used are structurally stable across the time period under study, The same is true for the cumulative sum of the squares of the recurring residuals (CUSUM SQ), as it occurred within the critical limits at the 5% level, and it is inferred from these two tests that there is stability and consistency in the model between the short and long terms.

6- - (Jarque-Bera): According to the (Jarque-Bera) test of (0.82) which is not significant at the 5% level as demonstrated by the Probability of (0.66), this means that the data follow a normal distribution:

Figure (2)
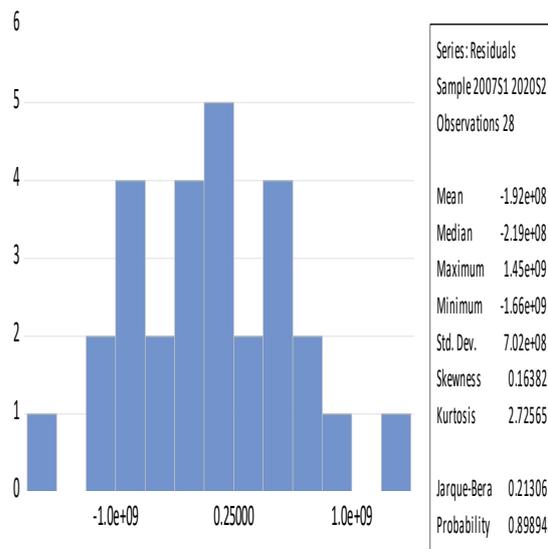
7- Estimation of short-term (error correction model) and long-term parameters according to the ARDL approach:

As long as it is ascertained that the studied variables are stable and eligible to be included in the model, and after estimating them in the short and long term, as shown in Table No. (14), we obtained the following results:

1. Public Debt (D): The relationship between the independent variable (BD) and the dependent variable (DE) in the short term and with a previous time lag showed a direct relationship between them, which is reflected in the public budget deficit, meaning that an increase in the volume of public debt by one unit leads to an increase in the deficit in the general Iraqi budget By (141) units, and the model is significant at the level of significance (1%) and according to the probability column (Prob), and this is consistent with the reality of the Iraqi economy and is identical to the content of the economic theory.

Some economic literature refers to the full picture of the effects of public debt on the budget deficit, which is a mirror of the state of financial discipline from the perspective of achieving revenues that exceed the value of debt, meaning that the loans will have positive and acceptable results if their proceeds are used to finance productive government spending that generates real incomes that lead in the term. However, the reality of the Iraqi economy indicates the inverse relationship between public debt and the budget deficit in the long term, according to the results shown in Table No. (7), which showed an inverse relationship between the independent variable (BD) and the dependent variable (DE) in the long term, and it is stable at the level (1 Level) and at a significant level (1%) without containing a fixed limit and also without a trend (None), meaning that the increase in public debt in the long term leads to a decrease in the public budget deficit, which is inconsistent with The economic reality in Iraq, and we can say that the positive relationship in the short term and the negative or inverse relationship in the long term is evidence that the problem is not in the volume of public loans, but the problem lies in the ways and extent of directing As loans towards investment and production channels that achieve financial discipline at high levels so that public revenues exceed the size of loans and the benefits resulting from them. It is clear from this review that public debt is a very important variable that affects the budget deficit indicator through which we infer the state of financial discipline.

2. Exchange rate (E): The relationship between the independent variable (BD) and the dependent variable (E) in the short term has shown that there is a direct effect (positive relationship) between the exchange rate and the general budget deficit in the Iraqi economy at the level (1 level) and at a significant level (1%), meaning that the decrease in the exchange rate of the local currency against foreign currencies leads to a decrease in the budget deficit by (254) units, and this does not agree with the actual Iraqi economic reality, as the exchange rate is indirectly related to the budget deficit indicator and then to financial discipline because it affects the The size of foreign currency reserves first, and then its results appear on the budget deficit and financial discipline.

The Iraqi non-oil exports are of very low rates, which explains the results of standard tests for this variable in the Iraqi economy for the period under study (2005 - 2020), but in the long term, the results showed that the relationship is inverse between the exchange rate and the budget deficit, according to the data of the deficit index model. Which shows the degree of financial discipline through Table (7), which is at the first level and with a morale level of less than (10%), which is identical to the actual reality of the Iraqi economy. This means that the decrease in the exchange rate by ten units leads to an increase in the budget deficit by (176.2)

units, which is Corresponding to economic theory.

3. Cash reserves (R): With regard to the effect of cash reserves of foreign currencies, the results of the independent variable parameter (BD) and the direction of the dependent variable (R) were significant at the first level with a significant level (1%) and with a negative sign, and this indicates an inverse relationship between cash reserves And the general budget deficit in Iraq, meaning that the decrease in

foreign reserves of foreign currency by one unit leads to an increase in the deficit in the general budget by (282.5) units, which is identical to the actual economic reality in Iraq as well as identical to the economic theory. In the long term, the results of the test (ARDL) showed The relationship itself, that is, there is a negative (inverse) relationship at the first level and the relationship is not significant according to the (Prob) column, and this applies to economic reality and economic theory.

Table (7) *The results of the error correction model and the long-term relationship of the function of change in the public budget deficit*

Short term milestones				
Variable	Coefficient	Std. error	t-stat	Prob
D(BD(-1))	0.862244	0.089575	9.625941	0.0000
D(DE)	-57.65783	29.15283	-1.977778	0.0735
D(DE(-1))	141.4184	34.31145	4.121611	0.0017
D(EEX)	253.52938	7639676.	0.000000	0.0000
D(EEX(-1))	374.48520	9070590.	0.000000	0.0000
D(RR)	-282.5492	41.66933	-6.780749	0.0000
D(RR(-1))	-246.4152	60.76208	-4.055411	0.0019
D(T)	915.6279	204.2577	4.482710	0.0009
D(T(-1))	-2051.644	291.1295	-7.047188	0.0000
D(MB)	-131.3454	71.63342	-1.833577	0.0939
D(MB(-1))	540.8251	86.79864	6.230802	0.0001
CointEq(-1)*	-0.733521	0.150794	-11.49597	0.0000
EC = BD - (-119.53DE – 1762196 EX – 13.63 R + 1645.80 T – 359.92MB) Error Correction Equation				
			Long-term milestones	
Variable	Coefficient	Std. error	t-stat	Prob
DE	-119.5375	11.94092	-10.01075	0.0000
EEX	-176.2196	4330741.	-0.406904	0.6919
RR	-13.63855	33.02532	-0.412972	0.6876
T	1645.807	229.2984	7.177574	0.1023
MB	-359.9223	52.83175	-6.812614	0.0000

The researcher based on the outputs of Eviews 12

5. Monetary base (MB): With regard to the monetary base, through the results shown in Table (7) that show the existence of a positive (positive) relationship in the short term, it became clear to us a previous time lag at the first difference and that the model is significant with a level of morality (1%), and this agrees With the actual reality of the Iraqi economy and with the economic theory, meaning that an increase in the monetary base by one unit leads to an increase in the deficit in the general budget, which means a decrease in the volume of financial discipline by (540.8) units. The budget deficit at the level (1 level) and at a moral level

(1%), which means that the decrease in the monetary base (MB) by one unit leads to an increase in the deficit in the general budget of the Iraqi state, which is contrary to the reality of the Iraqi economy and contrary to economic theory.

6. Taxes (T): As for the impact of taxes that were added to the budget deficit indicator to see the impact on financial discipline according to the indicator under study, the results showed in the short term and with a previous time lag (at the first difference) and with a negative sign, meaning that there is an inverse relationship between the budget deficit and the size of the change In taxes for the period under study (2005-2020) and at a level of significance (1%),

meaning that a decrease in taxes by one unit leads to an increase in the deficit in the public budget by (2051.6) units, which is a very high percentage, which reflects the congruence in the actual reality of the Iraqi economy and the results congruence with The economic theory and the significant impact on the volume of financial discipline, in other words, the results reflect the declining reality of the tax system in the country and the important and effective role of taxes in setting financial discipline and in supporting public revenues, as the low percentage of tax contributions to total revenues leads to significant negative results on the budget deficit index In the long-term, the results showed a positive relationship between the budget deficit and the level of taxes at the level, with a significant relationship of (1%) with The decrease in the percentage of tax contribution to public revenues by one unit leads to a decrease in the budget deficit by (1645.8), and this does not apply with the economic reality of Iraq and does not apply with the logic of economic theory.

As the economic literature considers taxes as the most important resource of the state and one of the most important financial policy tools that are used to achieve financial discipline, but its use in achieving financial discipline requires caution and extreme care so as not to become a tool that has a negative impact on macroeconomic variables, because any distortions in The tax system leads to negative effects on the economy as a whole and on financial discipline in particular, as the reforms of the tax system are part of the process of financial discipline, so taxes can be used to achieve financial discipline through two main channels, the first is transferring the tax burden from income to consumption and the second channel Imposing new taxes.

As for the error correction parameter (CointEq(-1)), its result was negative and significant at the first level, without conclusive and without direction as well, and at a level of significance (1%), which amounted to (-0.733521). This indicates the existence of a short-term equilibrium relationship between the studied variables, and it It was found that about (74%) of the imbalances that occur in the economic variables used in the budget deficit index in order to measure their impact on financial discipline in the previous period (t-1) can be corrected in the current period (t) towards

the equilibrium relationship in the long term when any occurrence of any A change or shock in the explanatory variables. Thus, and according to the results of the model shown in Table No. (14), the alternative hypothesis that states the existence of a short-term equilibrium relationship is accepted and the null hypothesis rejected.

From the above and by looking at the abstract of the research and the results reached by the researchers, we can reach the achievement of the hypothesis of the study to be tested, which is that the economic variables affect the budget deficit and thus the degree of achieving financial discipline, given that the budget deficit indicator is the most appropriate measure of financial discipline in Iraq, as The risks of an increase in the budget deficit are a major reason for the aggravation of the economic problems that the Iraqi economy suffers from. Therefore, the need for fiscal discipline is an urgent necessity that the country's economic policy must seek. This is what prompts us to list a set of proposals and recommendations, as follows:

Conclusions:

1. Financial discipline is affected by a number of factors that must be taken into account because the success or failure of financial discipline is linked to them. These factors can be summarized as follows:

A - Choosing the right time for the beginning of financial discipline.

B - Determining the period in which there should be financial discipline, such as three or five years or more, because financial discipline is clear in the measurement and results in the long or medium term, but in the short period the results of financial discipline are not clearly defined.

c- The size, strength, and intensity of financial discipline.

2. Changes in the monetary base (ΔMB) directly affect the state of financial discipline. Through the analysis of the data, we noticed that the decrease in the expansion of the monetary base leads to achieving fiscal discipline, and we find this clear in the years (2009, 2014, 2015, 2016) in which fiscal discipline was achieved. .

3. By studying and analyzing the changes in the data of the total public debt (ΔD), we note that the rise in public debt, which is directly related to the budget deficit, necessarily leads to an increase in the public budget deficit, which negatively affects financial discipline, and this means that the increase in the total public debt It leads to a decrease in the gross domestic product because of the deducted percentage of (GDP) that goes to repay that debt and its benefits. This means that the Iraqi economy is rentier with distinction and the public debt does not contribute to increasing production from other resources and as a result does not lead to an increase in GDP.

4. The rise in the value of the local currency against foreign currencies represented in the US dollar leads to an increase in foreign currency cash reserves and thus the emergence of their impact on financial discipline.

5. The study showed that financial discipline based on increasing taxes contributes to preserving economic resources from waste, which results in observing the rights of future generations.

Recommendations:

A set of recommendations can be presented in order to contribute to providing solutions to some of the problems that the Iraqi economy suffers from, the most important of which is the lack of financial discipline in the country's economic policy, which led to the increase in public debt and thus the continuation of the deficit in the public budget and to be guided by it as a general framework for economic policy to help decision makers, namely as follows:

1. The need to achieve financial discipline, and at all levels of government to support this through the availability of real political and economic will to achieve it, and the direct economic policy to apply this as an urgent necessity to advance the reality of the Iraqi economy.

2. Working to develop a tax system in accordance with international standards in order to be able to generate revenues that contribute a large percentage to covering expenditures and taking care of them as primary and not secondary revenues that work to reduce the

deficit in the public budget, which in turn leads to achieving financial discipline.

3. Taking correct and serious steps to combat administrative and financial corruption and granting the supervisory bodies more powers and support to carry out their duties properly before starting a program that leads to achieving financial discipline.

4. Working on diversifying the sources of revenue and getting out of the rentier nature by developing the industrial and agricultural sector and giving a greater role to the private sector to achieve a real increase in the domestic product, which results in an increase in tax collections.

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