Analysis of the relationship between fiscal policy shocks and monetary stability in Iraq's economy for the period 1990-2018

Abstract

The research aims to measure the impact of positive and negative fiscal policy shocks on monetary stability in Iraq, which represents monetary stability as an indicator of real and price stability. Fiscal policy shocks are quantitative changes in public spending and public revenue affecting the output and price cycle, and fiscal policy despite the accompanying time gaps, but it remains a policy Influential and has a significant degree of impact on economic growth and development in developing countries. The fiscal policy represents a numerical translation of the economic and social objectives planned in the state's general budget tool consistent with the GDP cycle. The economic and social goals stem from the core of the functions and the main objectives of the fiscal policy, namely the allocation of resources, stability and restoration Distribution and these functions, as we know, free market techniques may fail to achieve them, which interferes with the financial policy to address the failure of the market to reach the set goals, and that coordination between fiscal and monetary policies does not mean a loss of independence as much as it means correcting fiscal and monetary policies without causing undesirable adverse effects upon the necessary correction. For local courses Opposing this coordination, and we have touched on the monetary stability index adopted by the International Monetary Fund (IMF) to discuss the impact of financial shocks on the monetary stability index in Iraq, where the Iraqi economy witnessed positive fiscal and revenue policy shocks with limited negative financial shocks in spending. Public and public revenue and the impact was studied through the existence of long-term relationships that link fiscal policy shocks, i.e. quantitative changes in public spending and public revenue on monetary stability. The boundary test within the Autoregression techniques of distributed Lag demonstrated the existence of a long-term relationship between fiscal policy shocks and monetary stability in Iraq.

Opening words: fiscal policy shocks, monetary stability, self-degradation of distributed slowdown, production cycle, price cycle

Introduction:

The monetary stabilization index reflects the clear picture of the deflationary and inflationary economic cycle. As we know, the monetary stabilization index serves as an indicator of the aggregate demand cycle through monetary supply changes that represent the driver of aggregate

demand. The monetary stability is also an indicator of the aggregate supply cycle through GDP changes that mean economic growth. and thus monetary stability can be considered as macroeconomic stability indicating price stability and raising operating rates to full-use limits, Positive and negative fiscal policy shocks in developing countries, including Iraq, play a key role in achieving macroeconomic balances through their financial instruments.

The differing economic vision of the Iraqi economy before 2003 after 2003 allowed Iraq's monetary policy to reduce the impact of financial shocks by controlling inflation rates through foreign currency auction and price stabilization. Fiscal policy had to target economic growth in order to achieve macroeconomic stability, but this was not achieved. Fiscal policy continued to dominate monetary policy by indirectly financing public spending through the secondary market of government debt. Despite this, Iraq's economy continues to suffer from deflationary waves due to the dominance of the extractive oil sector in the components of GDP, which is a key part of the monetary stabilization index, The oil sector does not absorb much of the labour force, which is reflected in high unemployment rates.

Research Problem

Fiscal policy shocks cause short-term imbalances in the monetary stabilization index due to the rent nature of the State's fiscal resources and fiscal policy has not targeted economic growth rates

Research hypothesis

There is a long-term statistically moral balance between fiscal policy shocks and monetary stability and short-term imbalances rectify in the long run

The importance of research

The importance of research is summarized by the impact of financial shocks on the monetary stabilization index over two different periods in the overall direction of fiscal policy

Research Limits: The scope of temporal and geographical research is the extended period (1990-2018) in the Iraqi economy

Research methodology: The researcher used the method of descriptive analysis and graphic and measurement analysis to establish the research hypothesis

Research structure: The research department has three investigations. The first research examined the conceptual framework of fiscal policy and monetary stability. The second research targeted public spending, public revenue and monetary stability in the Iraqi economy for the period 1990-2018, while the third examined the measurement of the relationship between public spending and public revenue and monetary stability

Study 1: Conceptual Framework for Fiscal Policy and Monetary Stability Fiscal policy is defined as the generic name of taxation and spending decisions and activities of the federal government influencing the economy (Gorman, 2013, 273). Guartini defined it as a use of government spending and tax policy as a means of influencing determinants of aggregate production (Guartini, 1999, 299) The fiscal policy also summarizes the set of actions for the State's revenues and expenditures to achieve a set of desired economic and social objectives that are part of macroeconomic policies and have three main objectives: resource allocation, stability and redistribution (Mohammed, 2017, 214) Fiscal policy also clarifies the fiscal programmes by which the State's production must be divided between public and private consumption and the distribution of the burden of public goods payments among all citizens of the State (Samuelsson, 2006, 519)

Through the foregoing definition, the researcher considers that fiscal policy is a digital translation of the economic and social objectives planned in the State's general budgetary instrument consistent with the GDP cycle. Economic and social objectives are based on the main functions and objectives of fiscal policy, namely resource allocation, stability and redistribution. As we know, free market techniques may fail to achieve them. Fiscal policy shocks are quantitative changes in public expenditure and public revenues affecting the output and price cycle and fiscal policy shocks, despite accompanying time gaps, remain influential and have a significant impact on developing countries' growth and economic development.

Therefore, fiscal policy functions differ between developed and developing countries, where the fiscal policy function of developed countries is to intervene in the management of the economic crisis when it occurs and to achieve economic stability if the market cannot do so. in developing countries, the function of fiscal policy is to regulate the movement of investments, market intervention, the fight against poverty and job creation in an incomplete market (Jha, 2001:)

Economic and price stability in macroeconomics is not achieved through fiscal policy alone. A macroeconomic policy package, notably monetary and trade policy, must be aligned to formulate an integrated, nonoverlapping vision. As we know, fiscal policy may be discretionary or non-intrusive.

IMF relies on the Monetary Stabilization Factor (Z) to identify inflationary and deflationary trends and can be expressed in the following mathematical formula:

(Yahya, 2001, 57)

$$Z = \frac{\Delta M_s}{\Delta GDP}$$

So the IMF standard is a compass to detect economic cycles without specifying the type of countries or economies whether in developed or developing countries or economies of diverse sources of income or single sources of income.

Borio believes that the monetary stability index's UM is closely linked to price stability in economic cycles (Borio, 2002 23.(

The optimal growth rate of cash commensurate with macroeconomic production levels is a key factor in achieving monetary stability, but fiscal and monetary policymakers tend to maximize social well-being and finance social well-being through monetary expansion, causing a problem or cycle of economic inflation (Romer, 309:1997.(

Therefore, fiscal and monetary policymakers must be inconsistent when creating fiscal and monetary shocks that have the effect of stabilizing the output cycle and targeting growth, development and social well-being in order to achieve real price stability in the economy. This requires the necessary coordination of fiscal and monetary policy with fiscal and monetary changes because it is difficult to talk about fiscal policy success without involving monetary policy.

Coordination between fiscal and monetary policy does not mean loss of policy autonomy on macroeconomic objectives. Such coordination must be undertaken to prevent policy conflicts, achieve balance and economic stability and maximize economic and social well-being. Advice and coordination between fiscal and monetary policies enhance the long-term sustainability of government finances (Arestis, 2009:16)

Clearly, the coordination between fiscal and monetary policies

Romer examined the relationship between openness and inflation that was completed in the early 1990s and that relationship was somewhat weakened, particularly in developed and LDCs. One of the main reasons that contributed to curbing inflation was the central bank's independence from political pressure (Joseph-David, 2010. 603)

The harmonization of fiscal and monetary policies does not mean a loss of autonomy, as much as correcting fiscal and monetary policies without undesirable adverse effects when correcting the economic cycles of such coordination does not mean a lack of autonomy.

Many studies on the relationship of the central bank's autonomy and inflation rates have indicated that a greater degree of autonomy leads to lower average rates of monetary growth and inflation and greater monetary stability. (Robert 2009, 93)

Fiscal policy options as a means of removing inflation or stagnation Recession use government spending or taxes, and the use of fiscal policy is in two directions: (Ma 'ala, 2017, 218)

The first trend is the adoption of discretionary interventionist fiscal policy with the aim of achieving economic stability and this policy can be linked with any government The second tendency is to adopt the automatic non-interventionist fiscal policy. This policy aims to determine the optimal level of tax revenue and government expenditure depending on the business cycle. This is called integration into economic stability. If the macroeconomic gap becomes positive [Y] A > Y P. The value of actual GDP is greater than the value of possible or expected GDP.

From the foregoing, we infer that there is a pro-cyclical fiscal policy and a counter-cyclical fiscal policy and that the output gap reflects the existence of cycles. The monetary stabilization factor adopted by international organizations is not called the GDP changes consistent with changes in the monetary supply. Gross domestic product (GDP) means aggregate supply and monetary supply represents aggregate demand, so the researcher considers that the monetary stabilization factor is a factor of economic stability, which as we know is a compass of the inflationary or deflationary cycle in the general economy.

The overall policy of total stability has two objectives: (Al Dagher, 2018, 344-355)

- 1. Achieve a level of actual GDP in comparison to the expected level of GDP.
- 2. The actual inflation rate has reached the target inflation rate level, and there is no conflict between the stability of output and the stability of inflation in the long term as the economic Blanchard refers to this by divine coincidence.

So macroeconomic stability is the achievement of the optimal overall level of pricing and full utilization, to which the monetary stabilization factor, which represents the ratio of change in the monetary supply rate to the ratio of change in the GDP rate, indicates and the change in cash supply is the source of price changes and the change in GDP reflects the state of full utilization and target of output, And that fiscal policy shocks affecting the price cycle require direct change by monetary policy in controlling the money supply, i.e. quantitative changes in the money supply fiscal policy shocks affecting the output cycle, i.e. quantitative

changes in the volume of GDP, as fiscal policy represents the country and the country with a heavy footing in the economy, according to John Menard Keynes.

We will address the impact of fiscal policy shocks on the monetary stabilization index through the impact of financial shocks on the price cycle and the output cycle in the Iraqi economy.

Second Research: Public Expenditure, Public Revenue and Monetary Stability in Iraq's Economy 1990-2018

The Iraqi economy experienced positive fiscal policy shocks, with limited negative fiscal shocks in public expenditure and public revenue. This is due, inter alia, to the economic blockade, which has boosted the positive public spending waves and has led to a higher overall price level. We are witnessing higher inflation rates during the period of research. and then reduced inflation in specific years due to the Oil-for-Food and Drug Agreement with a gradual improvement in domestic production, especially in the agricultural sector, and coverage of aggregate demand through coverage of local food vocabulary (ration card vocabulary) Public expenditure continued to increase gradually, but this was not reflected in higher prices and inflation due to different economic trends after 2003, less dominance of fiscal policy over monetary policy and the end of cheap monetary policy, which caused positive revenue shocks that financed increased public spending.

The new economic orientation of the Iraqi State after 2003 was the beginning of the coordination of Iraq's macroeconomic policies, highlighted by fiscal and monetary policies, but did not last much. Rather, there was a disjunction between the two policies owing to the persistence of fiscal policy in its fiscal orientation and the reliance on oil imports. and the central bank responsible for the design of monetary policy had gained the independence of the monetary decision relatively and removed it from the dominance of fiscal policy in financing the fiscal deficit under Law 56 of 2004 in addition to replacing the currency and opening an auction of foreign currency to control price and monetary stability through the stabilization of the Iraqi dinar exchange rate, Foreign currency auctions contributed to reducing the overall price level and boosting the value of the Iraqi dinar against the United States dollar in foreign transactions In addition to the establishment of quarterly auctions of public treasury authorizations and government securities, the Central Bank financed the deficit not directly but indirectly through the Central Bank's secondary securities market and put it to local and foreign commercial banks, which helped the Central Bank to grant founding leave to many banks within the new economic vision requiring the restructuring of economic institutions according to market economy techniques.

The policy of institutional reconstruction, which includes privatization of state enterprises, reform of the legal structure and administration of taxation, creates the fundamentals of the capitalist economy, makes it possible for financial markets to function successfully and that economic stabilization is the result of institutional reconstruction. (Lizek, 2009, 7) However, institutional reconstruction has not taken place and the philosophy of privatization of lost State-owned enterprises has not succeeded. Public spending has continued to bleed, such as the lifestyle of the domestic financial cycle. The legal and financial structure has not been reformed to enhance the State's non-oil resources. Fiscal policy has continued to strengthen consumer public spending at the expense of raising productivity. (Oil Price) Oil revenues constitute 95% of imports of the State's general budget. Linking the general budget to oil despite the new economic orientation of the Iraqi State was reflected in the two most prominent crises after 2003: the global financial crisis and the crisis of ISIS gangs.

Coordination of fiscal and monetary policies is essential to achieve macroeconomic stability in order to avoid monetary effects of fiscal policy and override fiscal effects of monetary policy such as the impact of government spending shocks on high interest rates and the impact of higher interest rates on investment and utilization on the one hand and the impact of cash supply shocks on inflation rates and high government expenditure rates as a result of high inflation rates, Therefore, the fiscal theory of the overall level of prices emphasized the need to adopt precise fiscal policies so that monetary policy actions are not complicated in achieving the primary goal of price stability.

The structural balance of the balance is not only a quantitative balance between planned revenues and desired expenditures, but a structural situation that must lead to the attainment of the desired level of optimization in macroeconomic performance embodied by the matching of actual GDP with desired GDP s economic resources, maximizing economic surplus and building capital accumulation to help fiscal policy narrow the output gap so that the budget indicates its structural balance and considers this to be a constant of macroeconomic stability. (Valid, 2002, 433)

Iraq's monetary stabilization factor shown in table 2 indicated a rise in GDP levels and the entry of the Iraqi economy into deflationary cycles. This analysis can be valid if we look at the nature of the GDP that is distributed between the extractive oil sector and the services sector, reflected in the high unemployment rates as shown in table 1 due to the high value of the underlying GDP against actual GDP

Table (1) Fiscal variables (public expenditure and general revenue) and monetary (money supply and inflation) and real (GDP at current prices and unemployment in the Iraqi economy for the period 1990-2018

years	G	R	MS	GDP	INF	U
	1	2	3	4	5	6
1990	141791	84911	15359.3	55926.5	51.6	5.5
1991	17497	42280	24670	42451.6	186.3	6.5
1992	32883	50469	43909	115108.4	83.7	7.5
1993	68954	89971	86430	321646.9	207.6	8.5
1994	199442	25658.7	238901	1658325.8	492.1	10.5
1995	960784	106985.7	705064	6695482.9	351.3	12.9
1996	542542	178013	960503	6500924.6	-15.4	13.9
1997	605802	410537	1038097	15039144	23	15.4
1998	920501	520430	1351876	17125847	14.7	17.4
1999	1033552	719065	1483836	34464016	12.5	20.2
2000	1498700	1133034	1728006	50213699	4.9	22.4
2001	2079727	1289946	2159089	41314568	16.3	24.6
2002	2518285	1971125	3013601	41022927	19.3	26.7
2003	4901961	1598527	5773601	29585788.6	32.5	28.1
2004	32117491	32982739	10148626	53235358.7	33.6	26.8
2005	26375175	40502890	11399125	73533598.6	27	17.97
2006	38806679	49055545	15460060	95587954.8	37	17.5
2007	39031232	54599451	21721167	111455813	53.2	17.5
2008	59403375	80252182	28189934	155982258	2.7	15.34
2009	52567025	55209353	37300030	130643200	-2.8	14
2010	70134201	70178223	51743489	162064566	2.4	12
2011	78757666	108807392	62473929	217327107	5.6	11.1
2012	105139576	119817224	63735871	251907662	6.1	11.9
2013	119127556	113840076	73830964	271091778	1.9	11.8
2014	115937762	105364301	72692448	266420384.5	1.6	10.6
2015	70397515	66470252	69613150	194680971.8	1.7	12.6
2016	67067434	54409270	75523952	196924141.7	1.5	10.8
2017	75490115	77422173	76986584	225722375.5	0.5	22.4
2018	80873189	106569834	77828984	251064479.9	0.2	22.6

Source: CBI's Comprehensive Annual Bulletin 1990-2003 and Miscellaneous Bulletins and Financial Reports from 2004 to 2018.

Table (2) Public expenditure shocks, public revenue, money supply and GDP at current prices and monetary stabilization factor in the Iraqi economy for the period 1990-2018

years	ΔG	ΔR	ΔMS	Δ GDP	A MS
)				_ 451	$Z = \frac{\Delta \text{ M3}}{\Delta \text{ GDP}}$
	1	2	3	4	5
1000	1	2	3	4	3
1990	-	-	-	-	-
1991	-124294	-42631	9310.7	-13474.9	-0.69096
1992	15386	8189	19239	72656.7	0.26479
1993	36071	39502	42521	206538.5	0.20587
1994	130488	-64312.3	152471	1336678.9	0.11406
1995	761342	81327	466163	5037157.1	0.09254
1996	-418242	71027.3	255439	-194558.3	-1.31291
1997	63260	232524	77594	8538219.4	0.00908
1998	314699	109893	313779	2086703	0.15037
1999	113051	198635	131960	17338169	0.00761
2000	465148	413969	244170	15749683	0.01550
2001	581027	156912	431083	-8899131	-0.04844
2002	438558	681179	854512	-291641	-2.93001
2003	2383676	-372598	2760000	-11437138.4	-0.24131
2004	27215530	31384212	4375025	23649570.1	0.18499
2005	-5742316	7520151	1250499	20298239.8	0.06160
2006	12431504	8552655	4060935	22054356.2	0.18413
2007	224553	5543906	6261107	15867858.2	0.39457
2008	20372143	25652731	6468767	44526445	0.14527
2009	-6836350	-25042829	9110096	-25339058	-0.35952
2010	17567176	14968870	14443459	31421366	0.45966
2011	8623465	38629169	10730440	55262541	0.19417
2012	26381910	11009832	1261942	34580555	0.03649
2013	13987980	-5977148	10095093	19184116	0.52622
2014	-3189794	-8475775	-1138516	-4671393.5	0.24372
2015	-45540247	-38894049	-3079298	-71739412.6	0.04292
2016	-3330081	-12060982	5910802	2243169.8	2.63502
2017	8422681	23012903	1462632	28798233.8	0.05078
2018	5383074	29147661	842400	25342104.4	0.03324

Source: Pillars (1-2-3-4-5) of the researcher's work based on table data (1)

We note from table 2 that there have been significant shocks in expenditure and public revenues, reflected in the steady rise in the volume of money supply. The positive public spending shocks should have been reflected in increased economic growth rates and reduced unemployment, despite the fact that the cash stabilization factor indicates deflationary waves and indicates only narrow inflation waves. The reason is Monetary policy control over the monetary bloc, resulting in lower inflation rates in the post-2003 period

Higher GDP due to higher oil prices in the majority of the period, falling by the Dutch disease trap and the neglect of the rest of the economic sectors, reflected in deflationary cycles manifested by the high unemployment rate in the Iraqi economy

Third Research: Measuring the Relationship between Public Expenditure and Public Revenue and the Monetary Stabilization Factor

In order to ensure a common complementarity between fiscal policy variables and monetary stability, the following steps will be taken:

1. Stillness of Time Series

for Search Variables

The Phillips Perron test was approved to reflect the stillness of the time chain of public expenditure, public revenue and the cash stabilization factor and as the results of this test are shown in Table 3

Table (3) P.P. Test for Time Series at General Level and First Teams (2018-1990)

(2010 1990)						
Stationary	Level & Different		Time series			
	Constant and	Constant				
	Linear Trend					
I(0)	- 2.074102 -0.695110		public expenditure G			
I(0)	-2.175424	-0.298558	General Revenue R			
I(1)	-4.517655	-4.606697	public spending ΔG			
I(1)	-3.640207	-3.686150	General Revenue ΔR			
I(0)	-5.178373	-4.809450	Cash Stability Factor Z			
Probability	Critical Values					
I(0)	-3.580623	2.971853	5%			
I(1)	-3.587527	2.976263	5%			

Source: Prepared by the researcher on the basis of the statistical programme (E-views 10)

- 2. By observing the results of Table 3, Phillips Perron shows us the timelines of public expenditure, general revenue and monetary stability indicator, the stillness of the series for original data I (0) and the first teams I (1) for chronological chains of search variables has been tested according to the equations and linear models (fixed limit or fixed limit and general direction) at a level of 5%) and we found that the public spending chain and general revenue at the general level I (0) are not static, i.e. the calculated value is below critical value and the time chain suffers from the root of the unit and here we accept the hypothesis of nowhere (Ho: B = 0) that there is a loneliness root problem and we reject the alternative hypothesis (Ho: $B\neq 0$), the time series of expenditure and general revenue became static in the first difference (1).
- 2. While the monetary stability index series at the general level I (0) is static that the calculated value is greater than the critical value and the

time series does not suffer from the root of the unit and here we reject the hypothesis of nowhere (Ho: B=0) that there is a loneliness root problem and we accept the alternative hypothesis (Ho: $B\neq 0$) Because of the different stillness of time chains, we will have to use the ARDL self-degradation model and the Bound Test border testing technique to verify the existence of the combined integration between spending and general revenue, the monetary stability index and calculate the ECM error limit correction equation and this will be in the second step.

3.ARDL model and Bound Test boundary test with results shown in table (4) The test of a long-term balance between spending and general revenue and monetary stability If the value of F calculated by the boundary test is greater than the upper limit of the critical value at the level of 5%, we reject the non-existent hypothesis that there is no longterm equilibrium between model variables and accept the alternative hypothesis that there is a long-term equilibrium between model variables. (5) CoinEq (-1) = -0.91 which expresses short-term to long-term adaptation speed which must be negative and moral and why is the error correction value negative and moral? Because it means going back to right in government economic policies and tackling mistakes. In other words, fiscal policy can play a significant role in achieving monetary stability in the Iraqi economy. This is revealed by the equation of correcting the limit of error. The fiscal policy correction rate for money supply imbalances and GDP is 91%. This is a logical result and is consistent with the context, logic and role of fiscal policy in the Iraqi economy.

Table 4. F-Bounds Test Border Test Results to Measure the Integration between Public Expenditure, Public Revenue and Monetary Stabilization Factor

I(0)	Signif	Value	Test Statistic
2.63	10%	6.251701	F-statistic
3.1	<mark>5%</mark>	2	K
3.55	2.5%		
4.13	1%		
	3.1 3.55	2.63 10% 3.1 5% 3.55 2.5%	2.63 10% 6.251701 3.1 5% 2 3.55 2.5%

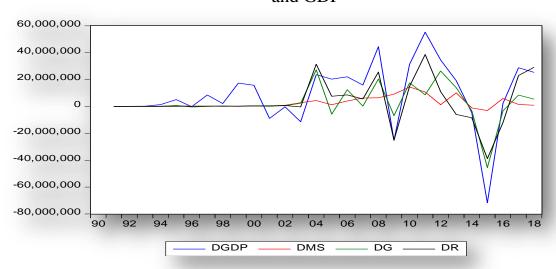
Source: Researcher's work based on the outputs of E-views 10

Table (5) ARDL Error Correction Regression test results between public expenditure and general revenue and monetary stabilization factor

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.2665	1.140148	8.62E-09	9.83E-09	D(G3)
				, ,
0.0000	-5.330743	0.170897	-0.911011	CointEq(-1)*
				1

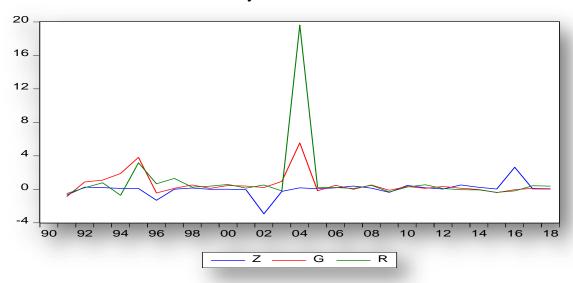
Source: Researcher's work based on the outputs of E-views 10

Form (1) Changes in public expenditure, general revenue, money supply and GDP



Source: Researcher's work based on the outputs of E-views 10)

Form (2) Annual Change Ratios Public Expenditure, General Revenue and Monetary Stabilization Factor



Source: Researcher's work based on the outputs of E-views 10

Conclusions

We conclude that positive and negative fiscal policy shocks affect monetary stability in the direction of deepening the deflationary economic cycle due to the absence of growth targeting programs A longterm balance exists between fiscal policy shocks and the monetary stabilization index, and short-term imbalances rectify in the long term by 91%. Fiscal policy continued with the old funding approach by replacing the funding method before 2003, public budget expenditures were financed directly under the cheap cash policy, whereas after 2003 the general budget expenditures were indirectly financed by placing public debt securities on the secondary market. financial policy has not played an active role in achieving macroeconomic stability, The lack of coordination between fiscal and monetary policies has made the task of controlling the inflation rate costing monetary policy much of the hard currency resources sourced from the extractive oil sector. policy ", coupled with the dominance of oil revenues on the side of public revenues, made fiscal policy flawed in its general decisions in the management of public finances

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