Policy Experiences of Different Countries in 2007-08 Global Financial Crisis

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Global Crisis Working Group

Economic Policy Research Foundation of Turkey

1. Introduction

The policy note “2007-08 Global Financial Crisis and Turkey: Impacts and Recommendations” published on 9 November 2008 as well as the following policy notes addressed the measures that will minimize the damage the global crisis will pose on the Turkish economy and put forth recommendations with this regard. It is doubtless that, in an environment where other countries have been implementing comprehensive measures against the crisis, it is crucial for Turkey to take economic measures without wasting time. This finding is also validated by the fact that the Central Bank has recently started to implement comprehensive measures and the negotiations for an agreement with the International Monetary Fund (IMF) have been launched.

This note addresses the policy experiences of other countries toward the global crisis and presents those experiences by categorizing the measures implemented by 41 different countries[1] apart from Turkey. The categorization presents 14 policy measures under four main policy areas given in Table 1. Table 2 ranks the measures in terms of frequency of implementation. Furthermore, Table 3 separately assesses to what extent the measures introduced by the examined countries match up with the macroeconomic features of those countries. Accordingly, a relation in the same direction between the rate of intensity of the measures and financial depth (loan volume/GDP), stock exchange market transaction volume, current account balance and budget balance. In other words, it can be concluded that the economies that have integrated into the global economy to a higher degree tend to take more concrete and comprehensive steps to overcome the impacts of the crisis.

2. Categorization

The measures implemented by countries against the global financial crisis are enumerated in Table A1. Nine important macroeconomic indicators for these countries and the exchange rate regimes actively used in those countries are given in table A2. The frequency of the implementation of the measures are presented and the concentration of the policy measures against the crisis in the country rankings made in

[1] The countries examined in the study (apart from Turkey) are the USA, Germany, Argentina, Australia, Austria, Belgium, Brazil, China, Denmark, Estonia, Finland, France, South Africa, South Korea, Georgia, India, Croatia, Netherlands, Hong Kong, United Kingdom, Ireland, Spain, Sweden, Switzerland, Italy, Iceland, Japan, Canada, Latvia, Hungary, Mexico, Norway, Pakistan, Portugal, Romania, Russia, Singapore, Serbia, Ukraine, New Zealand and Greece.

accordance with the macroeconomic indicators is summarized in Table 2 and Table 3, respectively.

As Table 2 reveals, more than half of the examined countries have changed policy interest rates. While Hungary, Brazil, Iceland, Mexico and Argentina increased the interest rates, rest of the examined countries cut down interest rates. Similarly, more than twenty countries provided guarantee for deposits and injected liquidity to domestic markets. Other frequently preferred measures are capital injection to the banking sector and the use of the swap channel. The swap channel measure as referred in this note covers the agreements that introduce or increase of the foreign exchange (FX) swap transactions as signed between central banks for FX liquidity, as well as the collateral swaps.[2] The USA, United Kingdom, Switzerland and Italy used the collateral swaps as the swap channel policy. Among other countries implementing the swap channel measures, Latvia signed a FX swap agreement with Sweden and Netherlands central banks while the rest of the countries signed a FX swap agreement with the FED. Besides these, other measures including the interventions in the FX market, state guarantee for the borrowings by the banking sector, state guarantee for loans, IMF IMF stand-by agreements, nationalization, expansionary fiscal policies, employment policies and cutting down the required reserve ratio have been implemented.

Table 1. Policy Categories and Measures

Policy Category	Measure
Banking Sector (BS)	- Deposit guarantees - Domestic liquidity facilitation - Recapitalization of banks - Loan guarantees - State guarantee for the borrowings of the banking sector - Nationalization/Transfer to public funds
Monetary Policy (MP)	- Changing policy interest rates - Exchange rate intervention - Changing required reserve ratios
International Institutions (II)	- Swap channel - IMF agreement
Other (Oth.)	- Expansionary fiscal policies - Employment - Other

[2] November 2008 Financial Stability Report published by the CBRT refers to the FX swap agreements and collateral swaps separately under the classification of the Measures against the Crisis. Similarly, while the mentioned study of the CBRT classifies liquidity injection and liquidity facilities for domestic markets as separate measures, this study consolidates these two measures under the category domestic liquidity facilitation.

Table 2. Frequency of the Implementation of Policy Measures (*)		
Measure	**Category**	**Frequency**
Changing policy interest rates	(MP)	31
Deposit guarantees	(BS)	22
Domestic Liquidity facilitation	(BS)	22
Swap channel	(II)	19
Other	(Oth.)	13
Recapitalization of banks	(BS)	11
Exchange rate intervention	(MP)	9
State guarantee to the borrowings of the banking sector	(BS)	8
Loan guarantees	(BS)	7
IMF agreement	(II)	7
Nationalization/Transfer to public funds	(BS)	7
Expansionary fiscal policy	(Oth.)	4
Employment	(Oth.)	2
Changing required reserve ratio	(MP)	2

(*) First column lists the policy measures and the policy areas of the measures are given in parenthesis the second column; see Table 1. Figures in the last column show the number of countries that implemented that specific measure.

The study herewith takes the practice of categorizing the measures in accordance with frequency of implementation and analyses the frequency of implementation of the measures together with the macroeconomic indicators of the countries implementing those measures. The objective here is to identify which macroeconomic indicators can have a role in the implementation frequency of the measures against the crisis, for the selected countries. To put it differently, the study tries to examine whether countries with similar macroeconomic features have implemented similar measures or whether a single package against the crisis can be recommended. This way, the "single measure package for a single crisis" hypothesis is partially questioned. Furthermore, the study has importance as it proposes a solid framework in a period where the measures against the crisis are still in the designing process.

The results of the analysis referred to above are summarized in Table 3. The study examines nine macroeconomic criteria: (1) Loan Volume/GDP, (2) Stock exchange market Transaction Volume/GDP, (3) Current Account Balance/GDP, (4) Budget Balance/GDP, (5) Public Sector Gross Debt/GDP, (6) Domestic loans to the private sector/GDP, (7) Market value of the companies listed on the stock exchange/GDP, (8) Total reserve assets/Monthly average import volume and (9) Reserves/Short term foreign debt. The analysis enumerates countries separately in accordance with these indicators and tests whether there is a correlation between the frequency of implementation of the measures and the rankings of the countries. For instance, for the ratio of loan volume to GDP, the countries are enumerated from the highest to the lowest ratio. Then, it is calculated how many countries among first 4, first 8, first 15, first 30 and total 42 countries implement a selected measure and the implementation frequency for that selected measure is expressed in percentages. In other words, if, under the rankings made as per these macroeconomic criteria, 3 out of first 4 countries implemented a change in policy interest rate and 5 out of first 8 countries implemented domestic liquidity facilitation measures; it is concluded that there exist a 75 percent concentration in the 'changing the policy interest rate' category and 'first 4 countries' group and a 62.5 percent concentration in the 'domestic liquidity facilitation' category and 'first 8 countries' group.

The measures implementation frequency for which is above 50 percent are considered to be concentrated on. In this sense, implementation of three measures is concentrated on in terms of the ranking made as per budget balance; implementation of four measures is concentrated on in the ranking made as per public sector gross debt, market value of the companies listed in the stock exchange and total reserves; implementation of five measures is concentrated on in the ranking made as per loan volume, stock exchange market transaction volume and current account balance; and implementation of six measures is concentrated on in the ranking made as per domestic loans to the private sector and short term foreign debt.

When the direction of the relation between the macroeconomic criteria and the concentration rate for the implemented measures is considered, it is observed that there is a significant relation between the frequency of the measures implemented in the following categories: Loan volume/GDP, Stock exchange transaction volume/GDP, Loans to the private sector/GDP, current account balance and total reserve assets. Accordingly;

- As loan volume/GDP ratio goes up, concentration rates for the measures changing policy interest rates, deposit guarantee, swap channel and recapitalization of banks increase;
- As stock exchange transaction volume/GDP ratio goes up, concentration rates for the measures changing policy interest rates, deposit guarantee, swap channel and recapitalization of banks increase;
- As loans to the private sector/GDP ratio increases, concentration rates for the measures changing policy interest rates, deposit guarantee, swap channel and nationalization/ transfer to public funds increase;
- As current account deficit diminishes and turns into current account surplus, concentration rate for the measure changing policy interest rate increases; and
- As total reserve assets increases, concentration rate for the measure injecting liquidity in the domestic market increases.

Apart from these, no significant in-the-same-direction economic relation was observed between public sector gross debt/GDP, market value of the companies listed in the stock exchange/GDP, short term foreign debt/GDP and budget balance, and implementation frequency for the macroeconomic criteria with high concentration.

Table 3. Policy Measures Concentrated on in the Ranking Made as per Macroeconomic Criteria

Criterion	Explanation	Measure	Groups where concentration is observed
Loan Volume/GDP	The variable was used as the indicator of financial depth of the countries. Rise in the value of the indicator implies a rise in the depth of the financial sector. The ranking was made starting from the country with highest financial depth to the country with lowest financial depth.	Changing policy exchange rates Deposit guarantees Swap channel Domestic liquidity facilitation Recapitalization of banks	All country groups All country groups First 4, 8, 15 and 30 countries First 15 countries and all countries First 4 and 8 countries
Stock Exchange Transaction Volume/GDP	The variable was used as an indicator of advancement in monetary and capital markets of the countries. Rise in the value of indicator refers to the advancement of financial markets. The study ranks the countries as per the advancement of their financial markets.	Changing policy exchange rates Deposit guarantees Domestic liquidity facilitation Swap channel Recapitalization of banks	All country groups All country groups First 4 and 30 countries and all countries First 4, 8 and 15 countries First 4 and 8 countries
Current Account Balance/GDP	The variable is used to indicate the degree of openness of the economy. Ranking is made beginning from countries with current account deficits to countries with current account surpluses.	Deposit guarantees Changing policy exchange rates Domestic liquidity facilitation Exchange rate intervention IMF	First 8, 15, 30 countries and all countries First 15, 30 countries and all countries All countries First 4 countries First 4 countries
Budget Balance/GDP	The variable is used to indicate fiscal discipline. Ranking is made beginning from countries with budget deficits to countries with budget surpluses.	Changing policy exchange rates Deposit guarantees Domestic liquidity facilitation	All country groups All country groups All country groups
Public Sector Gross Debt/GDP	The variable is used as an indicator of vulnerability of the public sector. Rise in the indicator represents a rise in the vulnerability of the public sector. Ranking is made beginning from countries with high public sector debt to countries with low public sector debt.	Deposit guarantees Changing policy exchange rates Domestic liquidity facilitation Swap channel	All country groups First 8, 15, 30 countries and all countries First 8, 15, 30 countries and all countries First 4 and 15 countries

Table 3. Policy Measures Concentrated on in the Ranking Made as per Macroeconomic Criteria (continued)

Criterion	Explanation	Measure	Groups where concentration is observed
Domestic credits to the private sector/GDP	The variable was used as the indicator of financial depth of the countries. Rise in the value of the indicator implies a rise in the depth of the financial sector. The ranking was made starting from the country with highest financial depth to the country with lowest financial depth.	Changing policy exchange rates Deposit guarantees Swap channel Domestic liquidity facilitation Nationalization/Transfer to public funds Recapitalization of banks	All country groups All country groups First 4, 8, 15 and 30 countries First 15 countries and all countries First 4 and 8 countries First 8 countries
Market value of the companies listed in the stock exchange/GDP	The variable, which shows the weight of the market value of companies listed in stock exchange in the economy of the country, implies the quality of the companies of the country. Ranking starts from countries where companies with high market value are dominant to countries where companies with high market values are less in number.	Changing policy exchange rates Deposit guarantees Domestic liquidity facilitation Swap channel	All country groups First 15, 30 countries and all countries First 15, 30 countries and all countries First 8 and 15 countries
Total reserve assets (in terms of months that will meet total imports)	The variable indicates the capacity of countries to fulfill their FX liabilities. Rise in the indicator implies that the vulnerability of the country on the basis of FX liabilities has diminished. Ranking starts from countries with high reserves to countries with low reserves.	Changing policy exchange rates Domestic liquidity facilitation Other Deposit guarantees	All country groups All country groups First 4 and 8 countries All countries
Total Reserves/Short term foreign debt	The variable is used as an indicator of vulnerability. Rise in the indicator implies a rise in the vulnerability of the country. Ranking is made starting from countries with high amount of short term debt to countries with low amount of short term debt.	Changing policy interest rates Domestic liquidity facilitation Other Exchange rate intervention Deposit guarantees Swap channel	All country groups All country groups First 4 and 8 countries First 4 countries All countries First 15 countries and all countries

3. Indicator Selection and Recommendations for Turkey

Majority of the countries subjected to analysis does not constitute a direct example for Turkey. Nonetheless, macroeconomic indicators of Hungary, Romania, Croatia and Mexico, as are presented in Table A2, match up with the indicators for the Turkish economy to a certain degree. A financial sector which is not deep enough, budget deficits and current account deficits imply that the characteristics of the indicators for the mentioned countries are quite close with those of the Turkish economy.

In this context, deposit guarantees, domestic liquidity facilitation, loan guarantees and IMF agreement measures implemented by Hungary; domestic liquidity facilitation, expansionary fiscal policy and employment measures implemented by Romania; deposit guarantees measure implemented by Croatia; and FED swap channel, exchange rate intervention and expansionary fiscal policy measures implemented by Mexico can be considered for Turkey.

It should be kept in mind that specific institutional conditions unique for each country will be determinant and the mentioned measures will be successful only if they are addressed as a coherent package and implemented with coordination. Avoiding the "mechanization" trap in the design and implementation of the measures shall constitute the basis of the process. The fact that in the analysis of the concentration rates of the implemented measures high rate of concentration was observed in some measures while no concentration was observed in some others emphasizes that economic features of individual countries are of great importance considering the identification of crisis measures.

Under the framework presented in this study, it is acknowledged that economic policy preferences in response to the latest global crisis are not just composed of black and white, and it can be concluded the economic policy also has grey components. That different countries devise different policies in response to a crisis that affects all economies simultaneously through similar channels also highlights this finding. It is among the important lessons to learn from the latest crisis that countries develop policies, which are unorthodox and relatively more creative in nature when compared with the past, in line with their own governance atmosphere. The policies to be developed must be dynamic and creative to respond the impacts of the crisis, which changes and deepens almost day by day. And this reveals that unorthodox policies must gain prevalence.

4. Latest Developments

It is observed that, Turkey has recently been taking new steps targeting to sign a new agreement with the IMF. Nonetheless, no concrete result has been achieved so far. It is still a valid statement that Turkey is quite late in this respect.

When specific monetary policy measures are considered, it is noted that policy interest rate is cut down by 175 basis points in total in October (23 October 2008), November (19 November 2008) and December (18 December 2008) Monetary Policy Committee meetings, and that new interest rate cuts were implied. Furthermore, with the FX required reserve ratio reduction introduced on 5 December 2008, significant amount of FX liquidity was injected in the markets. It is also meaningful that, at the same date, practice of paying interest for FX required reserves was given up and interest rate for required reserves in Turkish lira was increased to support reverse dollarization. Policy steps pertaining to FX and effective markets and to FX stock market as were announced earlier shall also be underlined.

In this context, it can be concluded that the Central Bank have been taking coherent measures to ensure that Turkey will overcome the crisis period more easily. Despite this, it must be kept in mind that it is essential to support the positive developments that the steps taken in the area of monetary policy will lead to with comprehensive measures to be addressed under the overall economic coordination.

APPENDIX-A

Table A1. Policy Measures Implemented in Analyzed Countries

# Measures the Country Implemented	Region	Category --> / Measure -->	Deposit Guarantees	Domestic Liquidity Facilitation	Recapitalization of Banks	State Guarantee for the Debts of Banking Sector	Loan Guarantees	Nationalization/ Transfer to public funds	Changing Policy interest rates	Exchange rate intervention	Changing required reserve ratio	Swap channel	IMF	Other	Expansionary Fiscal Policy	Employment
		Category -->	BANKING SECTOR						MONETARY POLICY			INTERNATIONAL INSTITUTIONS		OTHER		
		How many times the measure is implemented (Total)	22	22	11	8	7	7	30	9	3	19	7	14	5	4
8	EU 15	Germany	X	X	X	X	X		X			X		X		
4		Austria	X		X		X		X							
3		Belgium	X					X	X							
3		Denmark	X						X			X				
1		Finland							X							
6		France		X	X	X	X		X			X				
4		Netherlands	X		X				X					X		
8		United Kingdom	X	X	X	X	X	X	X			X				
3		Ireland	X					X	X							
4		Spain	X				X		X					X		
4		Sweden	X	X					X			X				
6		Italy	X	X	X	X			X			X				
3		Portugal	X	X					X							
1		Greece	X													
5	Asia-Pacific	Australia	X	X		X			X			X				
3		China		X					X					X		
7		South Korea		X	X	X			X	X		X		X		
3		India		X					X	X						
1		Hong Kong							X							
3		Japan		X					X			X				
2		Singapore	X									X				
3		New Zealand	X						X			X				
1	Other	South Africa							X							
3		Georgia								X			X		X	
1		Pakistan											X			
1	Other Europe	Estonia	X													
2		Croatia	X											X		
6		Switzerland	X	X	X				X			X		X		
8		Iceland	X		X			X	X	X		X	X	X		
4		Latvia						X		X		X	X			
6		Hungary	X	X			X		X				X	X		
3		Norway		X								X		X		
3		Romania		X											X	X
6		Russia	X	X	X	X		X						X		
2		Serbia								X			X			
1		Ukraine											X			
8	South America	ABD	X	X	X	X	X	X	X			X				
3		Canada		X					X			X				
5	Latin America	Argentina		X					X	X	X			X	X	X
6		Brazil		X					X	X	X	X		X	X	X
5		Mexico		X					X	X		X		X	X	X
3		Turkey		X					X		X					

Table A2. Selected Macroeconomic Indicators for the Analyzed Countries

	Source→	WDI 2007	WDI 2007	EIU 2007	EIU 2007	WEO 2007	WDI 2007	WDI 2007	WDI 2007	QEDS/WDI 2007	IMF
Region	Indicator→ (%)	Loan Volume/GDP	Stock Exchange Transaction Volume/GDP	Current Account Balance/GDP	Budget Balance/GDP	Public Sector Gross Debt/GDP	Domestic Loans to the Private Sector/GDP	Market value of Companies Listed in stock Exchange/GDP	Total Reserves /Monthly import average	Total Reserves /Short term foreign debt	Exchange rate Regime (according to the current actual regime classification of the IMF)
EU 15	Germany	125.69	102.00	7.70	0.01	63.2	106.10	63.86	0.99	5.8	Euro zone, free floating exchange rate
	Austria	124.49	32.21	3.24	-0.66	61.3	113.03	60.66	0.90	5.9	Euro zone, free floating exchange rate
	Belgium	114.42	57.00	0.70	-0.20	88.3	93.13	86.13	0.42	1.3	Euro zone, free floating exchange rate
	Denmark	207.38	78.60	1.37	4.45	31.8	204.67	90.15	2.18	11.1	Fixed exchange rate floating between Horizontal bands (+/-2.25)
	Finland	85.17	220.85	4.09	5.25	41	81.56	150.06	0.84	5.9	Euro zone, free floating exchange rate
	France	123.27	133.43	-1.21	-2.68	64	106.38	108.15	1.48	4.5	Euro zone, free floating exchange rate
	Netherlands	207.66	239.12	7.67	0.38	51.4	198.11	126.82	0.51		Euro zone, free floating exchange rate
	United Kingdom	193.65	378.49	-4.25	-3.00	43	193.13	141.45	0.50	0.6	Free floating exchange rate
	Ireland	198.80	53.58	-5.41	0.29	29.9	202.77	56.49	0.03	0.1	Euro zone, free floating exchange rate
	Spain	193.57	207.25	-10.09	2.23	42.6	183.68	125.95	0.38	2.5	Euro zone, free floating exchange rate
	Sweden	134.61	217.99	8.35	3.43	46.9	126.42	137.81	1.59		Free floating exchange rate
	Italy	129.37	109.77	-2.43	-1.54	104	101.51	50.90	1.54	9.7	Euro zone, free floating exchange rate
	Portugal	174.24	65.60	-9.90	-2.65	71.8	171.00	60.05	1.25	5.7	Euro zone, free floating exchange rate
	Greece	94.50	42.09	-14.10	-3.40	102.4	79.67	73.59	0.36	3.4	Euro zone, free floating exchange rate
Asia-Pacific	Australia	141.70	160.98	-6.26	0.68	15.4	127.40	158.01	1.20	7.8	Free floating exchange rate
	China	136.12	237.55	11.47	0.70	18.4	114.50	189.82	14.54		Traditional fixed parity practices (actual regime is different from the legal regime)
	South Korea	110.19		0.61	3.75	24.6	107.81	115.86	6.97	157.2	Free floating exchange rate
	India	63.06	94.58	-1.07	-2.75	75.9	47.42	155.35	8.82	748.7	Managed floating where exchange rate regimes are not set in advance
	Hong Kong	125.68	443.57	13.53	6.70	1.2	139.99	562.43	3.59	23.8	Monetary committee regulations
	Japan	294.40	148.45	4.81	-2.40	195.5	171.77	101.75	14.88	90.0	Free floating exchange rate
	Singapore	80.69	238.14	24.30	3.37	96.3	99.88	219.09	5.01		Managed floating where exchange rate regimes are not set in advance
	New Zealand	151.78	16.74	-7.96	3.88	25	155.75	36.68	4.13	1.8	Free floating exchange rate
Other	South Africa	88.74	153.38	-7.28	0.60	31.3	84.45	300.29	3.47	90.5	Free floating exchange rate
	Georgia	31.56	203.55	-18.98		23.4	28.33	13.65	2.57	58.1	Managed floating where exchange rate regimes are not set in advance
	Pakistan	45.74	69.95	-5.75		53.9	29.43	48.93	4.45		Other traditional fixed parity practices (actual regime is different from the legal regime)
Other Europe	Estonia	93.35	9.85	-18.05	2.70	2.9	94.37	28.37	1.90	26.3	Monetary committee regulations (Will adopt euro on 1 January 2011)
	Croatia	82.91	7.97	-8.62	-2.61	39.6	72.07	128.67	5.01	119.4	Managed floating where exchange rate regimes are not set in advance
	Switzerland	193.79	427.85	13.60	2.20	56.8	181.40	306.73	2.76	5.9	Free floating exchange rate
	Iceland	311.75	249.56	-15.80	5.15	24.3	326.98	207.86	2.08		Free floating exchange rate
	Latvia	94.80	0.52	-22.95	0	9.7	93.89	11.46	3.46	29.3	Other traditional fixed parity practices (Will adopt euro on 1 January 2012)
	Hungary	74.52	34.37	-4.87	-5.70	72.2	61.64	34.48	2.56	33.1	Fixed exchange rate floating between horizontal bands (+/- 15)
	Norway		123.55	15.57	17.40	82.7	0.00	93.58	4.75	18.3	Free floating exchange rate
	Romania	35.72	4.88	-13.67	-2.30	12.5	35.76	27.07	5.72		Managed floating where exchange rate regimes are not set in advance (Will adopt euro on 1 January 2014)
	Russia	24.93	58.45	6.07	5.40	9.5	37.74	116.42	15.89	358.2	Managed floating where exchange rate regimes are not set in advance
	Serbia	29.71	6.13		0.50	40	33.02	57.56	0.00		Managed floating where exchange rate regimes are not set in advance
	Ukraine	62.02	1.44	-4.22	-1.30	13.4	59.10	79.55	5.12	126.9	Other traditional fixed parity practices (actual regime is different from the legal regime)
South America	ABD	239.64	308.54	-5.30	-1.18	60.8	209.28	144.43	1.09	4.2	Free floating exchange rate
	Canada	165.56	124.06	0.89	0.91	68.5	136.81	164.85	0.91	10.9	Free floating exchange rate
Latin America	Argentina	28.60	3.15	2.71	1.20	56.1	14.47	33.04	8.48	105.2	Managed floating where exchange rate regimes are not set in advance
	Brazil	95.93	44.51	0.13	-2.30	47	49.77	104.28	10.90	209.3	Free floating exchange rate
	Mexico	43.15	12.94	-0.57	0.03	22.7	25.22	44.52	3.06	367.5	Free floating exchange rate
	Turkey	**48.50**	**46.02**	**-5.69**	**-1.63**	**39.4**	**29.04**	**43.61**	**5.03**	**172.6**	**Free floating exchange rate**