

Chapter 13

Measuring the Impact of Financial Crisis: A Financial Stress Index for Turkey

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ABSTRACT

Crisis in 2001 and global financial crisis in 2008 effect Turk economy in a lot of ways. Financial crisis creates destructive effect especially on increasing market economies. It is not so easy to watch occurring of this financial crisis and determining of its expanding. First of all determining of crisis terms are needed to predict of financial crisis. In this part, a financial stress index is composed by using TL interest rate and monthly data of global gross reserves belongs to \$/TL exchange rate between 1997:01-2014:12 terms for Turkey. Months when financial stress index raised to top level for Turkey and financial crisis are observed on, are found as February(2001) and November (2008).

INTRODUCTION

A crisis which could be happen in an economy, taking hold of all sectors arises from an event or a definite sector. Source of crisis is originated from whatever event or sector. As a result, this negatively effects production in real sector and employment. Financial crisis can cause long term decrease of prosperity of most people. Decreasing of this negative effect at least, is needed to effectively apply at the right selection of economic policies at the earliest time possible.

Fluctuations in economies are not seen as a crisis. Definition of economic shrinkage as well

accepted in literature, is decreasing two quarter of a years in a row in gross domestic product. In developing counties such as Turkey, falling short of savings and foreign source dependency increases financial fragility.

Fluctuations happening in the global market, could affect Turkey's financial markets negatively. Because of stress occurring in national and global financial markets, prediction of decreasing two quarter of a years in a row in gross domestic product is important as a financial crisis which could happen, negatively effects society's prosperity. Decreasing effects created by financial stress is at least related with its prediction. Financial

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stress terms are determined by helping various financial variables. Variables used can differ from country to country with the purpose of determining financial stress. To illustrate, countries of foreign-source dependencies have the importance of determining their savings in expenditures in financial stress terms.

Financial stress index occurrence with the purpose of determining financial stress terms have lots of benefits. By means of possible shrinkage' prediction, this provides policy precautions. Financial stress factors created by shrinkage allows for determining relative contribution. This determination helps the selection source of issue oriented economy policy organs. Also, determining sensibility limits related in calculated index incrementally allows implementation of economic policies. Besides, it enables calculated index's decomposition of domestic and foreign sources and it helps determining economic policies in this context.

This section is composed of two parts. In first section, theoretical information about financial stress index is given by mentioning financial crisis in Turkey. In the second section, financial stress index is proposed for Turkey.

Monthly data is used in this analysis given in the study and this is comprised in 1997:01-2014:12 terms. The major property of this term is that both domestic and foreign originated shrinkage was experienced in that same term in Turkey. Those two major shrinkages were experienced in this short term providing proper data for empirical study.

In this study crisis is defined as an index named 'financial stress index' in the literature by obtaining an average of TL interest rate and ratio of percentage change of gross foreign exchange reserve in the central bank of the Turkish republic in \$/TL exchange rate. Rise for \$/TL exchange rate and ratio of percentage change interest rate and decrease for ratio of percentage change net foreign exchange reserve in central bank of the Turkish republic, causes the development of this index. In the study, existence of a financial crisis

is accepted in the term when these indexes exceed the determined threshold value, in the contrary case, there was no financial crisis.

BACKGROUND

Financial Crises in Turkey

Financial instability has become the most distinct on property in last 15 years. Occurring in short ranges and repeated crises leave a lasting impression, especially on real economies of developing countries (Sharma, 1999).

Turkish economy increasingly faced with crises Since 1990s. Economic issues, exchange rate policies and political debates cause crises experienced in 1994 and 2001 in Turkey. Also, the financial crises which occurred in 1998 and 2008 resulted from the negativity in the global market.

Interest rate significantly increased in the second half of November of 2000, a huge amount of capital stock flowed abroad, national bank reserves rapidly decreased, a sharply decrease is observed in equity security prices and a medium-sized bank is taken out-system (BDDK, 2009). The first signal of crisis experienced in banking sector in 2001, burst into sight on November of 2001 (Kırkulak and Erdem, 2009). Actually crises dates from 22 November 2000 and 21 February 2001 are parts of a single financially characterized crisis in Turkey (Akdiş, 2002).

Before exchequer bidding on February 2001, adverse events caused the loss of confidence in applied programs and a critical attack occurred against the Turkish Lira. Later all these developments triggered off a process named as crises dates from 22 November 2000 - 21 February 2001 and has been an underlying liquidity and currency crisis (BDDK, 2009).

The last global crisis occurred with the collapse of two investment funds belongings to Bear Stearns on July 2007 (IMF, 2008). In the autumn of 2008 with intensifying global financial crisis,

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