

# Chapter 15

## The Twin Deficit as an Early Warning Sign in Avoiding Crises: The Case of Greece

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### ABSTRACT

*By analyzing the causes and consequences of Greek debt crisis, we identify early warning fiscal and financial signals. The existence of twin deficits for a number of years can be characterized as the key fiscal indicator concerning the debt problems faces Greece. Moreover, indicators from the banking sector also reveal significant information for the Greek crisis. The interdependence of banking and government sectors and opportunistic political behavior can affect dramatically a small economy. Common currency reveals structural weaknesses of the Greek economy.*

### INTRODUCTION

After the recent financial crisis, a large body of the research has been mainly focused on issues related to economic and financial stability, new indicators of economic and financial crises, systemic risk, macro prudential policy and regulation. In this context, the establishment of models and techniques that could be used as a tool to predict and prevent further crises is of great relevance both for researchers and policymakers. For in-

stance, central banks used the so called dynamic stochastic general equilibrium (DSGE) models as a feature of forecasting systems. However, DSGE models could not prevent the recent financial crisis. In effect, crises, by altering the predicted impacts of shocks, lead to events whose effects cannot be calculated using standard mathematical techniques.

Economic and financial stability indicators can be used as early warning indicators for possible financial and economic crises in recent economies

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(see for a survey Eichengreen, 2002). Researchers, such as Kaminsky, Lizondo and Reinhart (1998) selected thresholds for individual macroeconomic and financial indicators that minimized the outbreak of a crisis. However, this first attempt to predict crises was not very successful mainly because several important economic and financial variables were available only on an annual basis and therefore could not be used to predict crises (i.e. the external debt). Afterwards, improvement on the quality of data over a quarterly basis is achieved (see for instance Arslanap and Tsuda, 2012).

There is also a strand of the literature suggesting that the main reason behind the failure of models to correctly predict speculative attacks is the lack of information on the governments' willingness and ability to counter speculative pressures. Leblang (2001, 2002) shows that attacks are more likely to occur under left governments and in periods of elections with a considerable chance a change of government will occur. Moreover, Leblang (2003) shows that governments are less likely to successfully defend against an attack in the period leading up to elections.

There is a recent growing literature on early warning systems [see among others Babihuga (2007), IMF (2011), Baldacci *et al.*, (2011a), Baldacci *et al.*, (2011b) and Berti *et al.*, (2012)]. More precisely, Reinhart and Roggoff (2008, 2009, and 2011) identify the evolution of several financial and economic variables before and after financial crises, revealing important information on the understanding of financial crises and their time length. The European Commission (2011) based on a panel of 33 advanced countries for the period 1970–2010, shows that a composite indicator including a wide variety of both fiscal and macro-financial variables can predict with high probability crisis even.

In advanced economies, indicators of gross financing needs and fiscal solvency risks can be good predictors of possible fiscal stress in a country (Baldacci *et al.*, 2011b). According to Baldacci

*et al.*, (2011a) and Baldacci *et al.*, (2011b), in emerging economies the best predictors of fiscal stress are risks associated with the public debt structure. Berti *et al.*, (2012) argued that financial-competitiveness variables such as private sector credit flow, the current account balance, the yield curve and the change in nominal unit labor costs seem to be better leading indicators of fiscal stress. Additionally, Tagkalakis (2011, 2013) shows the importance of financial instability indicators on the deterioration of fiscal variables such as fiscal deficit and public debt.

In this context, this study will attempt to shed light on an important warning feature in order to predict and prevent crises. The evolution of the twin deficit over time can be considered as a very reliable indicator providing sufficient information about the state of an economy and about how vulnerable this latter can be in the case of unfortunate events in the world economy. The case of Greek crisis will be considered in the following analysis.

There are undoubtedly many reasons behind the debt crisis that hit the Greek economy in 2010. Starting from the important deterioration of main macroeconomic fundamentals over the period 2001-2009, the markets' lack of confidence in the ability of the Greek government to undertake important structural reforms, and then the involvement of IMF, lead to an increased uncertainty about the course of the Greek economy and isolation from the markets. Thus, the adjustment program was the only option for the Greek government in order to deal with the escalating budget deficits and public debt and restore the confidence of the markets.

Obviously, the Greek crisis is the result of many other factors such as the financial crisis of 2007-2008 and the resulting liquidity issues in the money markets, the close linkage of the banking system in Greece with the government sector, the system of taxation, tax evasion, bureaucracy, a production sector operating with a lot of intermediaries, and large underground economy. Therefore, since the introduction of euro, that is a strong currency,

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