Research in International Business and Finance 39 (2017) 206–214

Contents lists available at ScienceDirect

Research in International Business and Finance

journal homepage: www.elsevier.com/locate/ribaf

Political uncertainty and behavior of Tunisian stock market cycles: Structural unobserved components time series models

Afef Trabelsi Mnif (Dr. Assistant Professor of Economics)

High School of Commerce, University of SFAX, Research Unit of Economics and Development (URED), Tunisia

A R T I C L E I N F O

Article history:
Received 10 February 2016
Accepted 18 July 2016
Available online 5 August 2016

JEL classification:
G12
G15
C22
E47

Keywords:
Tunisian revolution
Political uncertainty
Stock market cycles
Structural unobserved components
Time series models

A B S T R A C T

This paper examines the impact of political uncertainty caused by the civil uprisings, (the Tunisian Revolution) on the behavior and characteristics of Tunisian stock market cycles over time varying. This paper aims to apply the methodology of univariate structural unobserved components time series models to extract cycle and trend components.

Our analysis showed that political uncertainty seems to generate unstable financial markets and more pronounced stock market cycles. The shock of the Tunisian revolution is very intense but temporary, and leads to a deviation of the trend from its original path. Indeed, during the period following civil uprisings, the amplitude and volatility of Tunisian stock market cycles have increased dramatically. But in the long term, the amplitude and volatility of stock cycles are amortized to achieve low. Overall, the findings are important in understanding the role of political uncertainty on stock market stability and are of great significance to investors and market regulators.

Contents

E-mail addresses: mnifafef@gmail.com, afef.trabelsi@escs.rnu.tn

http://dx.doi.org/10.1016/j.ribaf.2016.07.029
0275-5319/

1. Introduction

On 17 December 2010, vegetable vendor Mohamed Bouazizi set himself on fire in the Tunisian town of Sidi Bouzid. His plight, which came to symbolize the injustice and economic hardship afflicting many Tunisians, inspired street protests throughout the country against high unemployment, poverty, and political repression.

These widespread protests and demands for reforms (the so-called the Tunisian Revolution and "Arab Spring" movements) have led to varying degrees of political changes with rulers being forced from power in some countries along with changes of domestic and foreign policies in many governments.

The opportunity for political reforms in Tunisia brought along by the revolution is enormous and unprecedented. However, a major political event like this can also have an explosive effect on stock market instability because of its economic and social implications. On the other hand, political uncertainty caused by the unrest could manifest itself in stock market cycles and volatility reactions shaking international investor confidence. It is, therefore, imperative and informative to examine whether these political movements have indeed changed the political, social, and financial landscape of country. Several studies have looked at the effects of Arab Spring on the economic performance as well as the social or political environment (e.g., O'sullivan et al., 2012; World Bank, 2011). Yet, four years on, it remains relatively unclear whether, and to what extent, the recent political turmoil has affected the overall financial market. In this paper, we attempt to fill this gap by examining the change in Tunisia.

Specifically, we seek to address the following questions: Have the civil uprisings, i.e., "Tunisian revolution", affected the behavior and characteristics of Tunisian stock market cycles? What is the nature of the shock caused by the Tunisian revolution? And what is its effect over time?

The Arab Spring presents a fertile ground for informative and instrumental research. On the one hand, the revolutionary movements represent a departure from archaic political establishments and decaying economic arrangements and provide an opportunity for Tunisia to establish accountable, effective, and transparent governance. On the other hand, political uncertainty caused by the unrest could have economic repercussions, manifesting in stock market cycles and volatile reactions capable of quivering international investors' confidence in the region's markets.

This paper adds to the growing literature studying the link between political instability and stock market behavior in a number of ways.

Firstly, whilst increasing evidence showing that standard economic variables perform poorly in capturing stock price movements and political uncertainty is emerging as a new avenue to explore the forces driving market movements (Erb et al., 1996; Mei and Guo, 2004), most prior studies in this field have been primarily concerned with political events such as presidential elections, military invasions/wars and terrorists attacks. Little research has been conducted on the potential influence of an important source of political uncertainty arising from overthrown or changes in government as a result of civil uprisings. Using Tunisian revolution as a unique testing environment, this paper represents the latest attempt in assessing the effect of political turbulence on the stability of financial markets.

Secondly, from a methodological standpoint, this paper modifies and extends on the methodology used in prior studies Gulen and Mayhew (2000) and Antoniou et al. (2005). Most of the studies focus on the volatility or efficiency of the stock market. Our study is interested in the behavior of stock market cycles and their characteristics. We employ univariate structural unobserved components time series models to extract cycles and their characteristics: duration, volatility and amplitude. Moreover, the structural time series model splits every series into trend, cycles, and irregular components.

The main findings of our investigation can be summarized as follows.

First, our results indicate that Tunisian revolution conflicts and the associated political uncertainty seem to generate unstable financial markets and more pronounced stock market cycles. Second, our analysis showed that the shock of the Tunisian revolution is very intense and temporary, and leads to a deviation of the trend from its original path. Indeed, during the period following civil uprisings, the amplitude and volatility of Tunisian stock market cycles have increased dramatically. But in the long term, the amplitude and volatility of stock cycles are amortized to achieve low.

The remainder of this paper is structured as follows. Section 2 presents the research background, reviewing the related literature, overview of the Tunisian economy and effect of the revolution. Section 3 describes the data, descriptive statistics and methodologies employed; Section 4 presents and discusses the empirical results and robustness checks within univariate framework. Finally, Section 5 concludes the paper with a summary of main findings and their practical implications.

2. Research background

2.1. Political uncertainty and stock market instability

The effects that world events have on stock prices have intrigued financial economists for decades, especially after the dramatic rises and falls of stock markets in recent years. Intuitively, in times of political and civil unrests, it is not uncommon for stock markets to experience increased levels instability as the occurrences of major political events signal potential shift in policy which may cause market-wide valuation changes (Karolyi, 2006).

Lobo (1999) examines markets during the U.S. midterm elections in 1998 after a political scandal had been revealed and finds there was a great deal of insecurity amongst investors. Brooks et al. (1997) conduct a similar study in South Africa after a significant political change and find comparable results indicating that stock market volatility is closely linked to political