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Terrorism and Market Jitters

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- **What is the reaction of European markets to terrorist events?**
- **What influences reaction?**
- **Is there a contagion potential?**
- **How important are size, maturity and target attributes?**

Summary:

Terrorist actions can have a multitude of economic consequences that may adversely affect a number of economic indices, sectors and activities including growth and investment. From the markets' perspective, terrorist attacks are unforeseen events that, depending among other things on their magnitude, the number of casualties, the extent of the damages, the targets hit; shake and rattle them. Such incidents can also have a high contagion potential with the shock waves travelling quickly from one market to another. Nevertheless, the negative impact on markets from terrorist attacks is, in comparative terms, mild and short-lived.

Introduction

Beyond the loss of life and personal injuries that the victims of terrorist actions suffer and the atmosphere of fear terrorists seek to create with their premeditated use of brutal violence, terror also has real economic costs. These costs are not limited to the often very large amounts of resources required to provide protection against terrorism or to the immediate damages, loss of property and stock of capital a terrorist attack causes. A number of economic sectors and activities including growth and investment; FDI flows; the tourist industry; stock markets can be adversely affected by terrorist actions as the empirical findings of a plethora of studies have shown (see for instance Brück and Wickstrom, 2004; Enders and Sandler, 2006). Equity and capital markets are also susceptible to incur losses as a result of terrorist activity. From the stock markets perspective terrorist incidents represent exogenous shocks just as anthropogenic catastrophes and accidents, political risk and violent events such as conflict do. Although the threat of a terrorist attack is omnipresent, particularly in countries that are or have in the past been the victims of systematic and continuous terror campaigns (for instance Spain and the UK in the case of European countries), terrorist events when they occur are unforeseen and, depending among others on their magnitude in terms of victims and/or damages caused or target(s) hit, have the potential to shake and rattle markets and investors. Just as in the case of natural or anthropogenic catastrophes and industrial

accidents, terrorist attacks are unanticipated and hence market agents cannot hedge against them.

European market reaction

Most European countries have been the victims of terrorist attacks either from domestic or transnational terrorist organizations. Indeed, some European countries, such as for instance Spain and the UK, have been the venue of systematic and continuous terror campaigns, and have been the victims of recent mega-terrorist events that have taken place on the European continent and have captured world-wide attention because of their magnitude. The 11th March 2004 in Madrid and 7th July 2005 in London terrorist attacks, are in many respects regarded as the European equivalents of 9/11 albeit on a much lower scale if the number of fatalities and injuries is considered. The two attacks shared some common characteristics. The bombings targeted the transport system of the respective capitals of Spain and the UK and they were the work of Islamic extremists. "Homegrown" in the case of the London attacks, since the perpetrators were British citizens. As in the case of most terrorist attacks, the preferred venue by terrorist organizations are large urban centers since they offer a target rich environment and also maximize the impact in terms of damages and victims, hence wider publicity is guaranteed. The 11th March 2004 Madrid train terrorist actions consisted of a series of coordinated bombings against the Cercanías (commuter train) system of Madrid. The attacks caused the death of 191 people while another 1,755 suffered injuries. The direct costs were estimated to be around €212 million to the regional economy of Madrid, equivalent to the 0.16% of the region's GDP. The Spanish terrorist group ETA was initially held responsible but soon afterwards it became apparent that the bomb attacks were the work of Islamic extremists. The 7th July 2005 London attacks also were a series of coordinated bomb blasts that hit London's public transport system during the morning rush hour. They were carried out by British Islamist extremists. The suicide bombings were planned and executed as a means to protest against British involvement in the Iraq War and other conflicts. The bombings killed 52 commuters (as well as the four suicide bombers), injured 700, and caused a widespread disruption of the city's transport system and the country's mobile telecommunications infrastructure. In both markets a strong negative reaction was recorded on the day of the events. However, a significantly different recovery from the initial negative reaction to the two incidents was the case. In terms of days needed for the markets to rebound the London Stock Exchange recovered in a single trading day whereas the Stock Market in Madrid took slightly longer (Kollias *et al*. 2011b).

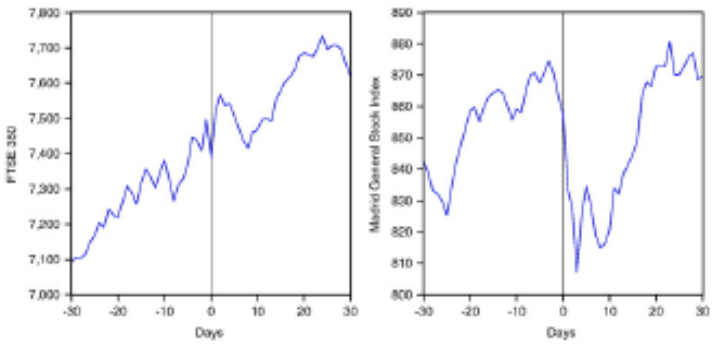

Figure 1: London and Madrid general indices before and after the terrorist attacks. Source: Kollias *et al*. (2011b)

Tentative explanations for this recorded recovery difference between the London and Madrid stock markets include differences in size, maturity and liquidity. Perhaps just as important was the fact that the terrorist cell responsible for the bombings in Madrid was neutralized a few days later thus, in a sense, it continued to present a potential security threat for a short period of time. This may have prolonged any negative effects on investors' sentiment and hence affected market performance. The initial confusion over the perpetrators of the attacks probably has also contributed to the uncertainty and the market jitters that the coordinated attacks created. Furthermore, different and perhaps more effective institutional arrangements may also be cited. For instance, on July 9, two days after the event, the Bank of England, HM Treasury and the Financial Services Authority revealed that, immediately after the attacks, they had instigated contingency plans (created after 9/11 for

Terrorist incidents exert a negative but short-lived impact on markets and equity

such an eventuality) to ensure that the UK financial markets could keep trading. This suggests that the existence of mechanisms and procedures that can be set into motion in cases of emergencies and unanticipated events that have the potential to shake and unsettle markets, can help absorb part of the shock through measures that at least partly offset the initial impact on market sentiment and volatility. Nevertheless, broadly speaking, despite the initial negative reaction, the dominant conclusion is that the overall net impact on the stock markets in both cases was short-lived and transitory. This in fact, is the general conclusion reached by most studies that have looked into markets' responses to terrorist attacks: in comparative terms, markets' negative reaction to terrorist attacks is rather mild and transitory.

Contagion potential

It is a well-established fact that the shock waves from major financial episodes, irrespective of the source that has generated them, travel across markets and countries with high velocity. Although, terrorist incidents exert a negative, albeit generally short-lived, impact on markets and equity returns; given the integration of European financial markets, mega-terrorist events also have a high contagion potential with their shock waves being transmitted across countries and markets. This cross-national transmission implies that other financial markets apart from the one in the venue country can be adversely affected though the propagation mechanisms that can be set in motion in the immediate aftermath of a terrorist attack.

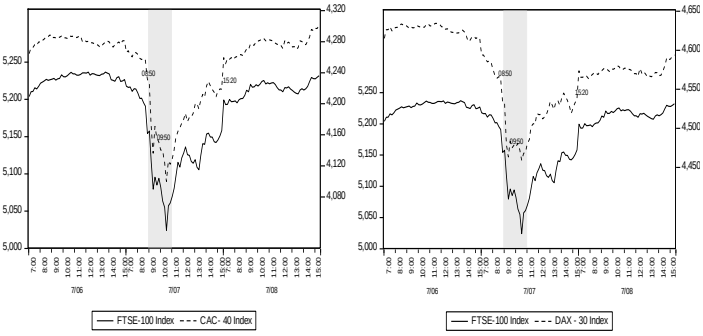

Figure 2: FTSE, CAC & DAX indices the days around and during the London terrorist attacks. *Source: Kollias et al. (2012)*

A terrorist induced financial market contagion example is the case of the aforementioned 7th July 2005 London attacks. The London Stock Exchange is one of the major financial markets globally and the bigger in terms of market capitalization in Europe closely followed by the German and French markets. Hence, the terrorist caused financial shock waves, albeit short-lived as already seen, had the potential to affect other major European markets given that the degree of integration between European markets is such that allows for the quick transmission of volatility and negative sentiment. Indeed, this has been found to be the case following the attacks in London. Kollias *et al*. (2012), using intraday data show how two other major European stock markets – Paris and Frankfurt were affected by the London bombings. The results, indicate that volatility increased as a result of the attacks in all three markets, and cross-market transmission of the financial shock-waves by the bombs was evident although not to the same degree. The Paris market, seemed to be more vulnerable to contagion vis-à-vis the Frankfurt one.

Market size and maturity, target attributes

Market size and maturity, play a comparatively small role in how markets react vis-à-vis other factors was the main finding of an investigation of how a large capitalization – the London Stock Exchange (LSE) - and a small capitalization – the Athens Stock Exchange (ASE) - European markets have reacted to various terrorist attacks used to quantify and measure reaction.

Apart from the size of an attack, such as the major 2005 terrorist hit in London, target attributes such as government *vs* civilian; foreign officials *vs* domestic government officials, *vs* businesspersons seemed to be better explanatory factors of the two markets' reaction to various terrorist events (Kollias *et al*. 2011a). Attacks by transnational terrorists result in a fairly similar behavior by both LSE and ASE. This probably reflects greater insecurity that such attacks invariably generate given the fact that they also tend to be of an appreciable larger scale. Attacks on government targets appear to affect more LSE vis-à-vis ASE whereas the latter seems to be more sensitive to

attacks on civilian targets and particularly so whenever prominent businesspersons are the victims.

Policy implications for authorities and investors

As already mentioned, in comparative terms, markets' reaction to terrorist incidents is rather short lived and not particularly pronounced. Nevertheless, pre-existing institutional arrangements and contingency plans for such an eventuality are key elements in minimizing the impact a terrorist attack will have on markets. The prompt and accurate flow and exchange of information between the cohort of agencies and institutions involved in such incidents – for instance government security agencies, emergency management and steering committees, market regulators and supervisors - improves co-ordination and dampens negative reaction. A prerequisite for this, is the existence of such reliable and simulation tested communication channels prior to the event. Furthermore, this flow of accurate and timely information, especially in the early stages following such an attack, acts as a shock absorber and has a soothing and calming effect on market agents and investors' sentiment. In turn, this diminishes the financial fallout of a terrorist incident.

Credits

This EUSECON Policy Briefing was authored by Christos Kollias & Stefanos Papadamou from the University of Thessaly. The views expressed in this briefing are the authors' alone.

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