PREVENTION AND INSURANCE OF CONFLICT AND TERRORISM: ISSUES AND EVIDENCE FOR LATIN AMERICA

ANDRÉS SOLIMANO*

1. INTRODUCTION

Political violence, conflict, terrorism cause severe dislocation to societies, often lead to losses of human lives and destroy economic assets. The causes of terrorism and conflict are very complex, often related to grievances associated with perceived social and economic injustices, the quest for political power and ethnic or religious motivations. The prevention of conflict and terrorism (C-T hereafter) is a very complex task that involves a combination of resources, intelligence capacities, institutional reforms that foster a culture of dialogue and peaceful resolution of conflict. Ultimately, economic progress and development are essential for peace and social stability.

As conflict and terrorism produces losses of human lives and destroy assets and property there is a need for insurance against this kind of risk. Insurance can be provided by both the state and by the market. In countries subject to long and violent conflict there is need for direct provision of insurance and compensation to the victims of conflict and their families. However, also private insurance for C-T risks can be developed. The development of market insurance for these contingencies require adequate pricing of C.T risk, a solid financial base of insurance companies and mechanisms for shifting risk particularly when we are in presence of "extreme events" that severely strain the financial capacity of private insurance companies. The losses of terrorist attacks are sometimes very large: think, for example, of the cost of over US 50 billions associated with the attacks on the twin towers on September 11, 2001, in New York City. The “extreme event syndrome” calls for some degree of state intervention to secure the solvency of insurance market institutions in the wake of large contingencies. Efficient public intervention requires an adequate understanding of issues of incentive-compatibility, moral hazard and risk diversification that are central in the theory and practice of insurance mechanisms.

Latin America has a long history of political violence with internal conflicts of different intensity, ideological origins, players and dynamics and terrorist
activities. These conflicts include civil wars, guerrilla movements, military intervention, coup d’état, terrorism and others form of violent confrontation. According to the United States Department of State, the Latin American region has the highest number of international terrorist attacks in the world, although most of them are concentrated in a single country: Colombia.

This paper discusses analytical and policy issues on the causes of conflict and terrorism and the role for prevention and insurance. It also provides some empirical evidence on the incidence of these phenomena in the Latin American and Caribbean region in the second half of the 20th century with more concentration on the 1990s and early 21st century. The paper examines the scope and limits of public and market insurance for terrorism and conflict and highlights the role of public intervention in either providing basic insurance against these contingencies and/or in fostering the development of insurance markets for terrorism and conflict in the Latin American region.

2. CONFLICT AND TERRORISM: DEFINITION AND SPECIAL FEATURES

Political violence, present in the history of human kind for ages, takes several forms: wars among countries, internal conflict, guerrilla warfare, military overthrow of civilian governments, terrorism, etc. Thus, political violence generates welfare costs as well as material losses. The motivations, patterns and dynamics of conflict are multiple. The motivation of internal conflict is related to grievances associated with unequal patterns of distribution of wealth, assets, the lack of political rights, ideology and social exclusion. The propagation of conflict and its duration depends on access to finance by combating groups and on other causes. A recent World Bank study on civil conflict (WB, 2003) shows complex interactions between social groups, ethnicity, access to natural resources and social exclusion in triggering civil conflicts. In addition, this study shows that conflicts persist over time when the rebel groups have a steady financial base that support their fights. This can be due to the exploitation of rich natural resources with a high liquidity value such as diamonds, oil, coca, and others. Also rebel groups often receive financial contributions from Diasporas of nationals living abroad that sustain the armed conflict.

There are some important differences between conflict and terrorism. Conflict involves regular armies and rebel groups and the scale of operations are much large than in the case of terrorism. Terrorist groups are often smaller than rebel armies and their targets are frequently civilians (and symbolic assets) rather than combatants of an opposite faction, although in conflict like guerrilla warfare, terrorism can be used by some of the factions as part of their tactics.

1 See “Patterns of Global Terrorism”, 2002, United States Department of State
2 See A. Solimano (1999).
3. Empirical Evidence on Conflict and Terrorism in Latin America

Table 1 in the annex shows the incidence of armed conflict in Latin America in the period 1946-2001, classified according different degree of intensity, internal versus external conflict and type of rebel and insurgent groups. The evidence portrayed in Table 1 shows that most of the internal conflicts were motivated by the interest of some of the groups in conflict to seize power, including the regular army through coup de état against elected governments. Large scale, sustained guerrilla warfare was observed in Cuba in the 1950s, in El Salvador in the 1980s, in Guatemala from the 1950s until the mid 1990s and in Colombia since the early 1960s until now. Wars among countries have been often short lived in Latin America; examples of this, include the conflict between Honduras and Nicaragua in 1957, between El Salvador and Honduras in 1969 and a short-lived war between Peru and Ecuador in 1995.

What about terrorism? Table 2 shows that in the 1991-2002 period, Latin America has the highest number of international terrorist attacks followed by Western Europe and Asia. However, those attacks are highly concentrated in one country: Colombia, that accounts for around 88 percent of the international terrorist attacks committed in Latin America (see Table 3), followed, well-behind, by Peru. In the 1990s, there were other high profile terrorist attacks in the region: the bombing in 1992 of the Israeli Embassy in Buenos Aires and the 1994 bombing of the Argentina-Israeli Community Center (AMIA).

4. Prevention and Insurance

Important policy issues are the prevention of conflict and terrorism and the insurance against losses of life, property and destruction or damage of assets. Preventing civil conflicts and terrorism is not a simple task. Path dependence is an important feature of these phenomena. Countries or regions with a long history of

---

3 See Gleditsch, et al., 2002.
5 International terrorism is defined as terrorist acts that involve nationals of more than one country and assets of international corporations besides national infrastructure. The data on international terrorism for Latin America and other regions of the world comes from the U.S. State Department’s publication: “Patterns of Global Terrorism”, various issues.
6 Argentina also suffered from left-wing terrorism in the late 1960s and early 1970s. Important left-wing groups that adopted violent methods were the Montoneros and the ERP (People’s Revolutionary Army of Argentina). Uruguay, over a similar period, also suffered from terrorism led by the Tupamaros. In the 1980s Peru was besieged by terrorist activity led by Sendero Luminoso (Shining Path). However, not all terrorist activity has been led by left-wing groups. During the right-wing military regimes of the 1970s in the Southern Cone of Latin America, state-sponsored terror was responsible for thousand of deaths.
conflict and terrorism (e.g. Colombia, Northern Ireland, Israel, the Basque country in Spain) have a higher probability of the continuation of conflict than a country with a history of peace and tranquility. At a broader level preventing conflict and terrorism is a complex task that involves economic, political and legal measures. A culture of negotiation and consensus can foster the peaceful resolution of potential conflicts in societies. In contrast, an easy access to arms and funding availability for rebel groups and individuals creates a better environment for conflict and terrorism to flourish. Economic development can also help preventing conflict. In fact, the World Bank (2003) study shows a lower incidence of armed conflict in countries with sustained economic growth and higher levels of per capita income than in poor and unstable countries. In contrast, the relationship between income per capita levels and terrorism is weak: we also see that terrorism occurs in medium income and high-income countries such as Northern Ireland, the United Kingdom, Spain and Israel and, recently, in the United States.

As conflict and terrorism cause economic damages and destroy human lives, people and societies are willing to invest resources to minimize those costs. Insurance against C-T risks can be provided by the public sector as in Spain, Israel, Ireland and other countries. The market also can provide private insurance for conflict and terrorism. Adequate pricing of C-T risks is one of the problems for the development of these markets. As insurance premiums are set in line with actuarial probabilities of events and the determinants of those probabilities, in the case of conflict and terrorism are not well known, pricing becomes a complex issue. Another potential impediment to the development of private insurance against these contingencies is the so-called problem of “extreme events” (large losses). Extreme events such as the terrorist attacks of September 11 in New York City can generate losses that often exceed the financial capacity of insurance companies. In the twin towers attack, those losses were estimated in over 50 billion dollars (see Jaffee and Russell, 2002). These events have usually a low probability of occurrence, near 1 percent, but very high possible losses. The key for insurance markets to operate efficiently and companies to provide insurance against large expected losses is the existence of mechanisms to shift risks from agents that are exposed to risk to agents that have a low position in risky assets. Individuals or communities exposed to the occurrence of terrorist attacks or conflict are “long” in risky assets –say their properties or themselves are exposed to large potential losses. They need, thus, to diversify those risks. In turn, in the capital markets there are agents “short” in risky assets that in exchange for an attractive return would be willing to acquire those assets provided their risk structure is not correlated with the risky other existing assets in their portfolios.


In the case of natural disasters the hurricane Andrew that hit the state of Florida in the U.S. in 1992 generated losses of near 20 billion dollars.
Insurance companies, by pooling assets with different risk distributions (cars, houses, life insurance, etc.), can reduce the costs of managing risks. However, in the case of conflict or big terrorist attacks their capital base, reserves and retained profits can be insufficient to absorb the occurrence of large contingencies. Therefore, companies face non-trivial bankruptcy risks when insuring events with large expected losses even if their probability of occurrence is low. To diversify risks, the insurance company may sell part of their risky portfolio to a reinsurance company. In turn, re-insurance companies also need to shift the risk of their policies to reduce insolvency risks. For this to happen, we need a liquid capital market that trade the suitable instruments able to transferring risk to agents with short exposure to risk but an appetite for good returns.

Such an instrument is a security called cat (catastrophe) bonds. Cat bonds usually pay to investors a substantial premium, often near 10 percentage points over LIBOR in exchange for an asset whose principal can be lost in the event of a disaster to occur (unprotected principal). The key element of the bond is that in the event of extreme risk the investor may not recuperate the principal of the bond, relieving the issuer of the Cat Bond of a large liability. The Cat bond reduces the strain on the capital base and solvency of insurers in the event of very large losses.

5. Public Intervention and Efficient Insurance

There are several instances in which the direct provision of public insurance is needed. For humanitarian considerations after a civil war or a large-scale conflict the families of victims of conflict often need to be compensated. This may take the form, for example, of for-life pensions to disabled former combatants and their families. After the end of the civil wars in Guatemala and El Salvador schemes of compensations were put in place by governments. In turn, countries such as Spain, South Africa, Israel and Northern Ireland that have traditionally suffered from terrorist activity, governments have created public schemes of insurance.

---

9 In Paul Samuelson (1963)’s terms the issue is to partition risk among various agents and investors.
10 The classic theory of resource allocation of risk (Arrow, 1964, 1996; Debreu, 1959, Borch, 1974) shown that individuals can manage efficiently their exposure to contingent liabilities by taking (long and short) state–contingent, risk exchange securities. In practice, catastrophe (Cat) bonds are state-contingent, risk-exchange securities that can transfer risks across agents.
11 Alternatively, the principal can be paid over ten years. The funds raised by the Cat bond are put in a trust account. This is another positive feature of these bonds since this reduces the credit risk of other instruments issued by insurance companies.
12 The attractive combination of return and risk has enabled individual issuances of Cat bonds for over 400 millions in the United States in the 1990s.
against terrorism based on mandatory premiums and/or taxes on property (see Jaffee and Russell, 2002).

Publicly provided insurance for C-T risks, in the absence of a market for such risks, certainly fills a gap but also carry some potential costs. First, there is no assurance that the public insurance company will properly price C-T related risk, particularly if general taxes on property are used to generate funds for the agency. The result may be an inefficient allocation of risk insurance. Second, although the solvency risks of the public sector is lower than the solvency risk of private companies given the capacity of the government to enact taxes, at social level the risk assumed by the state may be shifted to the private sector in unanticipated and inefficient ways (e.g. distortionary taxes can be levied). Third, an all-encompassing public insurance company can become a monopoly of insurance against terrorism, conflict and other forms of human-led disaster risk. As a result of this monopoly, competition is stifled and private markets for insurance may not develop.

According to the theory of insurance an incentive compatible insurance scheme is one that leaves the insured (or the insurance company) to cover the initial layers of risk. As we move up in the risk layers, we need to go to the capital market or be financed by the government as insurer of last resort. In fact, when the government is willing to reinsure the top tier of losses that are beyond the capacity of an insurance company or government agency, then we refer to this as the government playing the role of insurer of last resort.

In the United Kingdom the agency Pool Re (that provides terrorist insurance) is an example of a limited liability pool (LLP) combined with an insurer of last resort, the later function played by the British Treasury. In the United States, the California Earthquake Agency (CEA) is a LLP but without an explicit insurer of last resort like in the U.K. The combination of a state-provided LLP plus insurance of last resort has potential incentive problems that could be avoided by a market solution based on the securitization of insurance risk. In the British system, the allocation of insurance for high layers of risk is made by the state that provides insurance coverage for extreme events eliminating the risk of bankruptcy by the insurer. A

---

13 The case of Great Britain is interesting. A special agency called Pool Re, basically a mutual insurance company has been set up with the purpose of providing reinsurance of losses on commercial property sustained as a result of a terrorist attack (as defined by an enabling statute). The British government acts a re-insurer to Pool Re, therefore acting as an insurer of last resort, charging a premium to Pool Re only after the accumulated surplus reaches 1 billions pounds.

14 The agency of public insurance can be a quasi-public entity holding all C-T insurance risks backed by the capital base, reserves and retained is a case of the agency. In this case, the actual entity managing the insurance can be a limited liability pool (LLP) whose resources available to pay claims are given by its own capital base, reserves and retained profits. A LLP has no claim on government resources (Jaffee and Russell, 2003). In the event of an extreme event policyholders may not be able to receive full payments for their losses according to the formal status of a LLP. Of course, there is always the possibility of a government bail the insured a practice that creates its own problems of moral hazard.
market alternative is to transfer to investors in the capital market the risk of extreme events that generate large losses through a suitable security issued by insurance or reinsurance companies. That security could be the catastrophe bond of the kind we discussed before.

Still this may not be really a “pure” market solution. In fact, to provide some “comfort” to investors, the government may acquire Cat Bonds tailored to cover the highest layers of C-T risks. In this case, the government would play, implicitly, the role of insurer of last resort through its commitment to buy Cat Bonds to insure high-risk layers. Another possibility to reduce high layers risk is to open a credit line by Central Banks to primary insurance companies operating in the segment of C-T risks, playing the role of creditor of last resort. In this scheme, the loan will be oriented to cope with liquidity problems associated with payment of insurance losses related to C-T risks. The loan can also cover capital of insurance companies depleted after the occurrence of insurance losses. Assets of the insurance firm would collateralize the loan and government debt will have priority over claims on equity by shareholders. However, government debt will have less priority than the liabilities to insurance policy holders. The key question is whether the lender of last resort function of government is a substitute of the role of insurer of last resort. The most likely case is that the market will not accept the solution of a lender of last resort as a full substitute of an insurer of last resort; if this is the case, the capitalization of insurance companies exposed to large losses may not take place without an insurer of last resort.

Moral hazard issues

Public insurance with mandatory premiums and no deductibles often create moral hazard problems. In turn, private insurance of risks associated with C-T events can reflect the risk of low mitigation by the insured agent charging higher premiums. Of course, too high a premium may “kill” a market, so premiums must be in line with the capacity and willingness to pay of the clients. A combination of both self-insurance and market insurance would take care of the lower layers inducing a degree of prevention that reduce moral hazard. In addition, to retention (e.g. the existence of deductibles) as a device to reduce moral hazard problems, it is important that the trigger under which the insurance payment is activated is beyond the control of the “cedent” (the entity that buys the policy or transfer the risk to other agent).

The fact that the government is likely to play the role of insurer of last resort for high layers of C-T risk (or directly set-up a public insurance agency for all terrorist risk) creates, in principle, incentives for undertaking adequate prevention. Ultimately, the fight against terrorism is the domain, mainly, of governments, likewise the prevention of civil conflict.

Froot (1999) analyzing the market insurance for natural disasters recommends insurance contracts and cat bonds that cut losses into layers, so that each contract has an associated limit, or maximum possible loss.
6. **Final Remarks**

Currently, in Latin America there is a clear lack of both public and private insurance mechanisms for facing the contingencies associated with political violence, conflict and terrorism. These events have had a significant incidence in Latin America in the recent past and create losses of human lives, destruction of assets and entail social insecurity. Prevention of political violence, conflict and terrorism requires actions in several fronts: one is the development of a culture of understanding and peaceful resolution of conflict along with economic and institutional reforms that lift living standards and reduce inequality and exclusion. For humanitarian reasons there is a need of public insurance and compensation for victims and their families in countries that have suffered protracted and costly internal conflicts. At the same time, there is a potential scope for developing market insurance for terrorism and conflict related losses, provided incentives, risk and moral hazards issues are properly managed.

The development of private insurance needs to adequately manage complex pricing problems of this kind of risk as well as handle the financial consequences of “extreme events” in which a major terrorist attack (e.g. the New York City’s Twin Towers collapse on September 11) creates very high losses that strain the financial capacity of private insurance and reinsurance companies and create large bankruptcy risk. The problem of pricing of C-T risk may be particularly serious in the shaky area of terrorism and conflict, given the lack of precise and well-verified knowledge of the determinants and dynamics of these phenomena. In turn, solvency risk can be handled, in principle, through suitable financial instruments that shift risk from insurance companies to investors short in risky assets. Well-structured insurance schemes have the property of partitioning the layers of risk with self-insurance and market insurance taking care of initial layers of risk, leaving to international capital markets and public intervention to provide risk protection against “extreme events”. Moral hazard problems associated with too little mitigation and insufficient prevention is another dimension of the development of adequate insurance of terrorism and conflict risk. In any case, the social benefits of having adequate prevention and insurance mechanisms for these large contingencies are bound to be very large in historically conflicting Latin American societies.
REFERENCES


Solimano, A., Editor (1999), Social Inequality University of Michigan Press, Ann Arbor.

