THE IMPACT OF ECONOMIC, GOVERNANCE AND TERRORIST ACTIVITY ON COMPLIANCE WITH FATF RECOMMENDATIONS

by

Hattan Shami

A Dissertation submitted to the

Graduate School-Newark

Rutgers, The State University of New Jersey

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Graduate Program in Global Affairs

Written under the direction of

Carlos Seiglie

and approved by

_____
Carlos Seiglie

_____
Yale H. Ferguson

_____
Jun Xiang

_____
Abdulmohsen Alyas

Newark, New Jersey
May 2015

- ## Abstract

Terrorism has become one of the most important threats today, not only because of the acts themselves, but because of the complex instruments that are used in order to put these actions into practice. Among them, the financing of terrorism has developed more diversified and increasingly complex facets, with various channels that terrorists use in order to launder funds and finance these actions. In order to better combat money laundering and terrorist financing, the Financial Action Task Force (FATF) was created, with a set of 40+9 recommendations that states should apply in order to address this pressing and potentially dangerous issue. States are evaluated among each other, in geographic groups, with the resulting mutual evaluations serving as a basis for compliance analysis. I propose to look at how certain economic, governance or terrorist activity indicators impact the level of implementation of FATF recommendations.

I began by collecting a set of data reflecting the level of implementation of FATF recommendations in all states. The compliance level is measured on a scale from 1 to 4, with 1 showing no compliance and 4 reflecting full compliance. I then collected information for five indicators to reflect economic freedom (Index of Economic Freedom), economic activity and development (Real GDP), governance (Control of Corruption and Rule of Law) and terrorist activity (Global Terrorism Index). I then used a linear regression analysis model in order to understand the significance of regression results and the relationship between

the indicators and the level of FATF compliance. My results show that only the first two indicators (Index of Economic Freedom and Real GDP) have significant results and correlation coefficients that show a direct relationship with the average FATF compliance. For 15 selected FATF recommendations, these two indicators consistently generate significant results. Implications for policy could include the fact that instruments to increase transparency in an economy and economic trade will also increase the level of compliance.

II. Acknowledgments

I would like to thank my professors, who were instrumental to the success of this dissertation project. Professors Seiglie and Xiang, as well as professors Ferguson and Alyas, had the patience and dedication to go with me through various methodologies, look through a large volume of data, help identify the appropriate statistical model and regularly monitor my work progress. This could have never been completed without them.

I would also like to thank my family, my parents, my brothers and sisters and all my close friends, who have kept me on-track and have supported me in this endeavor.

I. Abstract i

II. Acknowledgments iii

III. Introduction ..... - 1 -

IV. Literature review ..... - 18 -

V. Methodology ..... - 38 -

Data, Research Design and Overall Methodological Approach ..... - 38 -

Structure of the analysis ..... - 41 -

Appropriateness of Design ..... - 45 -

Potential threats to the validity of the design ..... - 46 -

Research Questions and Hypotheses ..... - 48 -

Population ..... - 53 -

Sampling Frame ..... - 59 -

Data Collection ..... - 60 -

Data Analysis ..... - 63 -

Validity and Reliability ..... - 64 -

Summary ..... - 65 -

V. Statistical Analysis ..... - 67 -

Statistical and descriptive analysis of Data ..... - 67 -

Regression analysis average FATF compliance with all five independent variables ..... - 70 -

Regression analysis with average FATF compliance and each independent variable ..... - 72 -

Regression of 15 selected recommendations and the five independent variables ..... - 74 -

Conclusions ..... **- 80 -**

VI. Qualitative analysis – country case study ..... **- 84 -**

General presentation ..... **- 84 -**

Qualitative analysis of data ..... **- 86 -**

Comparative analysis of the selected 15 FATF recommendations ..... **- 98 -**

Conclusions ..... **- 102 -**

VII. Conclusions ..... **- 109 -**

Conclusions of the statistical analysis ..... **- 111 -**

Conclusions of qualitative analysis ..... **- 114 -**

Hypotheses validation ..... **- 116 -**

Overall conclusions. Proposals for future studies ..... **- 119 -**

Policy recommendations ..... **- 128 -**

References ..... **- 130 -**

Bibliography ..... Error! Bookmark not defined.

Appendices **1**

III. Introduction

Defining terrorism remains a complex and unsolved enterprise, with general acceptance that it is difficult to agree on a strict definition of the term, despite the fact that everyone knows or could explain what terrorism is. The problem is not necessarily understanding the term itself, but creating a definition that encompasses legal elements and that becomes a mutually binding definition for the member states of the inter-governmental Financial Action Task Force (FATF).

Among others, Hoffman (1998) goes from a strict dictionary definition of terrorism to a historical presentation of terrorism, going back to the French Revolution and moving through the modern era toward the present. Rather than restricting the definition, Hoffman prefers to list a number of characteristics of terrorism in the second edition of his book, characteristics that he considers fundamental in an attempt to understand what this phenomenon represents. These general characteristics include the political motivation for terrorist acts, the presence of violence in the act itself (including the threat of violence), and the long-term psychological effect on the population (Hoffman, 2006).

Until 9/11 and the terrorist attacks on the World Trade Center in New York, this phenomenon had been considered a regional or, at most, a national issue. Terrorism was usually the result of regional conflicts that had gone on for long periods of time, whether in Russia (terrorism spurring from the Northern Caucasus, as a result of the wars with Chechnya during the 1990s), in the Middle

East (the long-fought conflict between Israelis and Palestinians) or isolated manifestations of Islamic radicalism, such as what has recently occurred in Egypt or Indonesia. Other causes of terrorism included separatist tendencies (Basque terrorism, for example), and nationalist terrorism (other than the previous examples, the Palestinian Liberation Organization (PLO) during the 1970s and 1980s) (Hoffman, 2006). Today, radical Islamic terrorism, while not traditionally known as a wide-spread form of terrorism, upstages most all forms of terrorism. The result of this regionalism was the fact that terrorism was, with a few exceptions, not in the public view and an issue that was generally under the scrutiny of a group of knowledgeable individuals that dealt with its proliferation. Its regional/national characteristic implied that the diversification of instruments used in the fight against terrorism was limited to traditional action. These were lacking the sophistication for dealing with the financing of terrorist actions or the money laundering in the context of terrorist activities.

However, the mechanisms of terrorism in these regional frameworks were in no way different from a global framework or perspective. Terrorism actions were financed through sources that evaded state and local authorities. Money laundering, as a systemic process, provided the best way to hide and move the money around in an efficient manner. Even if the ways of terrorist action often overlapped, from suicide bombers to kidnappings, the financing of these acts relied on specific recognized approaches.

With the 9/11 attacks, terrorism not only became a global phenomenon, but it also came into the spotlight. Authorities and the public in countries all over the globe understood fundamental truths about it. One truth was that terrorism is not an isolated event. Indeed, it can happen anywhere and at any time. After 9/11, subsequent suicide bombings followed in Europe, from London to Madrid, as well as in the Middle East (in Amman, Jordan). This truth remained fundamental because it is the underlying reasoning behind terrorism: the capacity to create terror for the population at any given moment and place.

The second important result coming out of the new global perspective on terrorism was that everyone is involved, to some degree or other, in the global struggle against terrorism. Seeing that the last bastion, the US, was no longer safe in the confrontation with outside planned terrorist attacks, the rest of the world as well as the American people understood that as of that moment on, no place on earth was to be regarded as safe from terrorist threat. The only positive things that came out of this tragedy were that entities and individuals became more active and more involved in combating terrorism all over the world.

At the same time, specialized entities fighting against terrorism became more competent and more creative in tackling not only the final results of terrorist processes, but the entire, more complex, phenomenon, including the flows that assured financing for terrorist actions and the complementary money laundering actions.

The United States and other like-minded countries now employ a vast array of instruments in the fight against terrorism. These range from training local law enforcement units of friendly countries to cooperating in the counterintelligence field in order to discover information that can lead to preventing terrorist attacks. The US authorities have not been adverse to strikes against known terrorist locations or leading manhunts for terrorist leaders, the most preeminent examples remaining Osama bin-Laden, in 2011, as well as other top leaders of the al-Qaeda network.

As mentioned above, another consequence of the tragedy of 9/11 was that, as specialists better understood the terrorist phenomenon and looked at ways to better combat it, terrorist financing became a very important area of study and action. As Pieth (2002) showed, “following the money” became a key strategy in combating terrorism. “Following the money” implied understanding where the money to finance terrorist actions came from and how it reached, in a complex, intricate flow, the end recipients that used it to finance their acts.

Another idea, as I will discuss further below, is that following the money implies greater financial transparency among states fighting global terrorism. This also implies and supports actions such as combating money laundering, terrorism financing and other forms of subversive, non-transparent activities that subsequently translate in the improper use of different cash flows.

A wide body of literature has been dedicated to better understanding how terrorist activities are financed, on tracing terrorist financing and analyzing

different areas of vulnerability that can encourage and support terrorist financing (Kaplan, 2006; Pollinger, n.d.; Dalyan, 2008). These researchers label, as one of the primary categories of terrorist financing, illegal activities, including illicit drug trade, illegal commerce or counterfeiting schemes. Naturally, cash resulting from these types of activities needs to undergo a process of money laundering in order to be subsequently viably used in financing terrorist actions, particularly since the financing process needs to leave no trace for investigating authorities, so that the terrorist process can continue and so that the sources remain anonymous.

Although money laundering and terrorism financing appear as two distinct criminal activities, they are complementary and the underlying framework is similar: in both cases, the parties involved look to legitimize cash flows. In the case of terrorism financing, this cash flow is then used for terrorist activities. In the case of money laundering, the cash is reintegrated into a now legal process and used in legal economic transactions (Daylan, 2008).

As Pieth (2002) explains, the USA Patriot Act, signed by President George W. Bush in 2001, identified the intrinsic connection between terrorism financing and money laundering. The Act emphasized the role that money laundering played in the process of terrorism financing. Kersten (2002) argued that money laundering provided the necessary hidden mechanism which functioned efficiently in terrorism financing.

Attempts to link money laundering to terrorism financing have abounded in the last two decades, as experts increased their understanding of the connection between the two. Balaceanu and Porojan (2012) look at both money laundering methods and the routes that illicit funds go through in order to finance terrorist actions. They analyze methods ranging from money laundering through real estate investments to money laundering originating from fraud or drug trafficking.

Winer (2002) connects the dots in his article relating globalization, terrorist financing and global conflict. As he explains in the introduction to his article, 9/11 was possible, in part, because nineteen terrorists were able to benefit from sources of finance that allowed them, after entering the United States on different occasions, to participate in the financial and economic life within the country, including renting cars, living off available funds, financing their studies and setting up personal bank accounts.

After 9/11, “following the money” led investigators to a bank account in Dubai, as one of the sources of cash. Despite some basic existing legislation against money laundering in place in Dubai, the terrorists were able to effectively hide the source and location of their funds to the degree to which the money arrived “clean” in the US and the authorities were only alerted after the attacks.

In the case of 9/11, cash of dubious origin (on many occasions, terrorist activities are, in fact, financed through illegal funds) were laundered to the degree to which there was no reaction either from the US authorities or from

banks in other countries as the cash flowed in from the Middle East sources to the terrorists in the US.

One underlying motivation of this aspect was related, in fact, to a lack of transparency in the international financial system and, to the same degree, a lack of successful, ongoing and efficient cooperation between state actors and state authorities to combat money laundering and terrorist financing. The fact that the bank transfers had the appearance of ordinary transactions with ordinary destinations such as to support foreign students for their studies in the US gave the terrorists the necessary anonymity and allowed them to act according to their plans without any interference from outside. In this particular case, a consistent cooperation between financial institutions and those institutions that were in possession of names of al-Qaeda members could have helped raise a red flag.

It is clear today that the financing aspect of a terrorist attack is crucial both for those who are trying to prevent disasters like the 9/11 tragedy from happening as well as for those who plan them. In order to start tracking the money, one needs an initial alert as harmless looking transactions are not enough to raise questions from the part of the financial institutions about their real purpose. On the other hand, other agencies, like the FBI, for example, could provide the names that may lead to starting an inquiry into the final real destination of the amounts transferred. One thing is absolutely clear: no money means no resources for the terrorists. As Dennis M. Lormel testified before the Subcommittee on Counterterrorism and Intelligence in 2012, “What is important,

especially in dealing with more minimal dollar amounts, is identifying case typologies and using them to develop targeted transaction monitoring strategies. This leads to the need for more consistent collaboration between law enforcement and the financial services sector" (Lormel, 2012)

One of the responses of the international community to all these challenges and problems was the creation, in 1989, of the Financial Action Task Force (FATF), an intergovernmental policy body that proposes to "set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system (FATF, N.D.)." With that proposed objective, the FATF has put out a total of forty initial recommendations targeting money laundering.

The recommendations are extensive and aim to cover any potential aspect of money laundering, proposing that financial and non-financial entities report suspicious transactions and rely on a proper structure for regulation and supervision. There are also specific recommendations for customer due diligence and record-keeping, as well as for international cooperation, particularly mutual legal assistance and extradition.

The FATF was initially created as the Financial Action Task Force on Money Laundering and represented an attempt by the 7 most industrialized countries in the world, grouped under the G7 framework, to recognize and address issues related to money laundering. The original Task Force included in

addition to the G7 states (France, Germany, the U.K., Italy, the U.S., Japan, and Canada), the European Commission and eight other countries.

The Task Force was created with the specific objectives of analyzing existing money laundering trends and of creating a set of appropriate instruments to combat money laundering at a global level and in a coordinated manner. The first result of the work of the Task Force was the publication, in April 1990, of a report that contained, among other issues, a set of Forty Recommendations ,calling for a “comprehensive plan of action needed to fight against money laundering” (FATF website). The Task Force has increased in membership from the original 16 members to 28 and then 36 members today.

In 1999, as a further coordinated effort, at the UN level this time, the International Convention for the Suppression of the Financing of Terrorism (known as the Terrorist Financing Convention) was adopted and ratified by 185 states. Some 11 countries that are members of the UN have not yet signed the Convention, among them Iran, Somalia (signed, but has not yet ratified), Eritrea and South Sudan. Considered a highly successful agreement on combating terrorism, given the large number of states that have ratified the Convention, this agreement has several objectives that include supporting cooperation between signatories on policing and judicial actions.

One of its interesting components is a definition of terrorist financing (or a person conducting terrorist financing) as:

> “any person who by any means, directly or indirectly, unlawfully and willfully, provides or collects funds with the intention that they should

> be used or in the knowledge that they are to be used, in full or in part, in order to carry out:
>
> (a) An act which constitutes an offence within the scope of and as defined in one of the treaties listed in the annex; or
>
> (b) Any other act intended to cause death or serious bodily injury to a civilian, or to any other person not taking an active part in the hostilities in a situation of armed conflict, when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organization to do or to abstain from doing any act." (UN, 1999, n.p.)

The importance of the Convention cannot be overestimated. The FATF and the 40 recommendations represented a generous framework of instruments, however, at the time of the Convention, only 28 countries were members of the FATF. Moreover, the FATF was specifically targeting money laundering and did not focus on terrorist financing until later on. The Convention gave the fight against terrorist financing an overarching acceptance and legitimized it as an effort on behalf of all UN member states.

As mentioned above, the globalization of terrorism and, as a consequence, subsequent efforts by governments to address terrorism as a global phenomenon and respond to it in an overarching manner, became more evident after 9/11. The FATF launched nine new recommendations, focusing on terrorism financing. There are several interesting aspects about these recommendations, showing that the special recommendations were designed to have a cohesive effect and join existing initiatives in a meaningful effort.

The first of the nine recommendations, for example, is to ratify and implement UN instruments for combating terrorism. Primarily, this refers to the 1999 UN International Convention for the Suppression of the Financing of

Terrorism, previously presented, but also to UN resolutions applying specifically to terrorism financing. Another important recommendation (recommendation II) is to “criminalize the financing of terrorism and associated money laundering”, thus linking money laundering with financing of terrorism and with the necessity to fully criminalize these acts.

The revised 49 FATF Recommendations, published in 2012 (40 + 9), were the product of extensive research and study from the FATF during the decade from 2001 to 2011 presented, in an assessment on Global Money Laundering & Terrorist Financing. The two aims of the revised recommendations, as FATF mentions, were (1) to strengthen the requirements in areas of high risk, but also to better adapt them for areas identified as new threats and (2) to improve their targeting, to make them both more focused and more flexible (FATF, N.D.).

The direct instrument that the FATF uses in the fight against money laundering and terrorism financing is the mutual evaluations that states are conducting. The mutual evaluations are a peer review process that analyzes the level of implementation of FATF recommendations and the level of compliance with these recommendations (APG).

The mutual evaluation is a complex process that involves both a desk-based analysis of the country’s performance and an on-site evaluation visit. The evaluation teams are formed of experts from other countries, as well as from the FATF Secretariat, giving the evaluations the necessary “mutual” characteristic,

aimed to maximize objectivity. This type of approach ensures an inclusive analysis of implementation in each country.

The implementation of the FATF recommendations is measured against a scale proposed by the FATF that includes different levels of compliance: compliant (C- full compliance), largely compliant (LC), partially compliant (PC) and non-compliant (NC). Each of the evaluated countries will receive, in the end, a full set of evaluations following this scale, determining the level of compliance for all of the 40+9 FATF recommendations.

As more and more countries begin to implement and comply with the FATF recommendations, a natural question that arises is what factors tend to favor (or, on the contrary, disfavor) a successful implementation with the FATF recommendations. In other words, what categories of countries will likely comply to a higher degree than others and what factors influence this differentiation.

This is the area of research that this study aims to address and enhance. The dissertation aims to analyze the situation in a country from different perspectives: the overall economic situation, the level of development of democratic institutions and the level of terrorist activity – all these are elements that characterize a country and that this paper assumes play a role in the implementation of the FATF recommendations.

As such, the overall purpose is to create and analyze correlations between the above-mentioned elements and the level of FATF compliance, as reflected in the countries' mutual evaluations. This will be done through a series

of regression analyses, comparing sets of data from indicators best reflecting each of the areas mentioned in the previous paragraph with the level of compliance with the FATF recommendations.

This statistical research and analysis is complemented with a distinct chapter of comparative analytics, focusing on a group of five countries, diverse from a political and socio-economic perspective. The purpose of this chapter is to reflect with concrete examples the statistical conclusions of the analysis and to understand whether those conclusions are confirmed according to country scenarios.

An interesting category of studies relates to the efficiency of the FATF as a transgovernmental network tackling AML/CFT. Starting from the acceptance of a North-South deficit of democracy, Blazejewski (2008) proposes that a transgovernmental network such as the FATF may be less efficient on its own and only functional in a wider framework that includes partnerships with other international institutions. Blazejewski's work is very useful as a starting point in investigating the role of the FATF in the international arena, as well as where the FATF is actually making a difference and where it still needs to improve its performance.

A wide array of work points out both FATF strengths and concerns related to FATF effectiveness. Some studies show that critics have seen FATF as an instrument of developed economies in their fight against money laundering (Hale, 2011). Others emphasize, in fact, the positive effect of the FATF in the

global fight against terrorist financing through the FATF instruments (e.g., compliance, standards, peer review evaluations) (Gardner, 2007).

An extension of these studies is the research done in determining the effectiveness of the mutual evaluations as a FATF practice. The work in this field seems to be limited to a qualitative assessment and an intrinsic conclusion that the process of mutual evaluation is useful in showing the degree of compliance to the FATF recommendations. Johnson (2008), for example, notes that the third round of FATF mutual evaluations has shown a declining compliance. Her study is limited to a comparison of pre-2003 and post-2003 reporting of the evaluations (Johnson, 2008).

Much of the existing research related to FATF recommendations, their implementations and the general effectiveness of the FATF instruments, including the periodic peer evaluation, appears to be limited to general considerations regarding a particular area of interest. Many studies point out that FATF is effective to some degree, but not on its own. The distinct effects on the countries where the FATF recommendations are implemented have not been comprehensively studied. The conclusions are generally based on a qualitative analysis rather than a quantitative one that would link the different variables involved and would better reflect the reality on the ground. Some limited research has been done on where FATF works best, but only by looking at isolated country examples.

A particularly worthy theoretical study in the field of compliance is the work by Karolina Lula (2014). Taking into consideration the level of compliance of each country with the IX Special Recommendations of the FATF, she aims to create correlations between the level of compliance and the level of terrorism threat, the number of active transnational terrorist groups in a country, the level of threat coming from terrorist groups using suicide terrorism as a tactic, whether a state is a democracy or not, the state's capabilities, and whether a state is economically tied to the United States or not. While comprehensive and aiming to discuss various aspects related to terrorism, looking into compliance theory and at outcomes of terrorism among other aspects, her work brings added value through her analysis of how bilateral trade between the United States and a country positively impacts compliance.

Within all these notable studies on terrorism and compliance, my work discusses a very particular area and, as I will show below, my research brings a significant new addition to the existing knowledge base. First of all, the data used is comprehensive and it includes both the initial 40 recommendations and the subsequent 9 targeting terrorist financing. The goal is to ensure a relevant AML/CFT data range in the process of analyzing existing links to the X variables. To my knowledge, this type of extensive data gathering has never been attempted and it requires looking at all mutual evaluations for all countries and compiling large amounts of information reflecting the level of compliance for each of the 40+9 FATF recommendations.

Second, for each of the areas of study previously mentioned, I use a consistent set of indicators to reflect the conditions in a country across the board. In order to successfully test all the hypotheses, I look at indicators ranging from the country's GDP to indicators reflecting rule of law or level of corruption. In my opinion, this type of vast enterprise will be essential in providing relevant insight into what factors play a role in determining the level of compliance for a country. Complementing Lula's (2014) work on factors that affect the level of compliance, I am able to determine correlations between the political and economic conditions in a country and the level of compliance, as well as between the nature and level of development of state institutions and compliance with FATF recommendations.

Third, the dissertation has a separate chapter wherein a set of countries is selected and their results are discussed in more detail. The role of this chapter is to understand whether the global results obtained in the statistical analysis are confirmed by case-in-point situations. The selection of the countries was performed so as to have a representative sample of democracies and dictatorships, countries with strong economic situations and countries with weak economies, as well as location and availability of data.

The structure of my paper is as follows: In Chapter 2, I discuss the relevant literature, with particular focus to studies on the financing of terrorist acts. This chapter also looks at existing studies on correlations and analysis of relationships between relevant socio-economic and governance factors and

FATF compliance. In Chapter 3, I describe the research methodology, detailing, in particular, the five working hypotheses that this paper proposes and that have been briefly mentioned in one of the previous paragraphs. I also describe, in more detail, the statistical approach that will be a substantial part of this analysis.

Chapter 4 presents the conclusions of the statistical analysis, focusing on creating links between the X, independent variables (economic freedom, Real GDP, governance and the level of terrorist activity) and the Y, dependent variable (level of compliance with the 40+9 FATF recommendations). Chapter 5 goes into more detail by looking at the concrete results obtained by five countries, selected on the criterion of different political and socio-economic realities. The point of this chapter is to understand whether the results of the statistical analysis can actually be supported by the particular country cases. Finally, chapter 6 presents overarching conclusions and proposes potential future areas of research and analysis.

IV. Literature review

Money laundering and financing terrorism are playing pivotal roles in today's economies and the IMF has stressed this in numerous reports and analysis. According to a 2012 report presented in the American Congress:

> According to the IMF, money laundering accounts for between $600 billion and $1.6 trillion in economic activity annually. Money launderers exploit differences among national anti-money laundering systems and move funds into jurisdictions with weak or ineffective laws. In such cases, organized crime can become more entrenched and create a full range of macroeconomic consequences, including unpredictable changes in money demand, risk to the soundness of financial institutions and the financial system, contamination effects on legal financial transactions and increased volatility of capital flows and exchange rates due to unprecedented cross-border transfers (Jackson, 2012).

There is quite a large volume of literature that aims to link anti-money laundering (AML) and counter-financing of terrorism (CFT) to different internal factors, including the level of political stability, the economic situation, the level of development of democratic institutions, and the level of terrorist activity. However, most of this literature is generally disparate, with the authors focusing on one particular area and the way the internal factors in question impact AML/CFT policies.

When it comes to research conducted in a comprehensive manner, the material is limited. Further research should be conducted in order to fully acknowledge the relationship between CFT, AML, the Financial Action Task Force (FATF) recommendations, and the national environments of the countries that have adopted the FATF recommendations and set them in practice. There is

one important attempt in this sense to be found in the doctoral research conducted by Katarina Lula (2014).

Lula's (2014) work sets out to identify elements that impact the compliance of countries with the FATF IX Special Recommendations on Terrorism Financing. Focusing on elements such as the intensity and magnitude of terrorism threat, the rate of international terrorist attacks and the rate of suicide attacks, as well as internal factors such as capability and regime type, she concludes that none of these elements seem to have a statistically conclusive impact on the level of compliance with FATF IX Special Recommendations.

In her opinion, backed by the statistical results of her regression analysis, it is only the US influence, translated in the bilateral trade relationship of a country with the US, which is statistically correlated to the level of compliance. In her subsequent qualitative analysis, she goes into deeper detail to understand why this correlation is statistically proven. Lula (2014) argues that the higher compliance levels are likely linked to amplified bilateral trade with the US through the direct American interests in concrete implementations of CFT measures as a result of a greater interaction with the respective country.

Another similar comprehensive approach, with different variables, representing the factors that impact FATF compliance is Yepes' (2011), as part of an IMF working paper on the theme. Yepes groups the factors into several categories, including cultural factors (Money Laundering/Financing of Terrorism criminalization), institutional factors, and socioeconomic and financial factors

(trade openness, FDI to GDP ratio and bank concentration, among others). Yepes concludes that all of these factors are fundamental to FATF compliance.

Among other attempts to link specific determinants to FATF compliance, Beekarry's work (2011) is worth a particular note. Rather than looking at internal determinants, as this dissertation does, Beekarry analyzes some of the external determinants and factors that influence AML/CFT compliance. These factors include the particularities of the AML/CFT regime as a soft law[1], the mechanism of compliance monitoring and the framework's legitimacy. One could potentially also add here the mutual evaluation process as the evaluating instrument (whether being evaluated by peers has an impact on compliance). There is obviously a large amount of literature on the topic of external factors that have an impact on compliance, but this is not the focus of this paper.

This literature review focuses on analyzing the existing literature in each of the five areas of study pertaining to this dissertation, namely: the political stability and political situation in a country; the economic situation; the level of development of democratic institutions, the level of social and the level of terrorist activity. For a better analysis, the literature was divided into subchapters, based on these five areas of study, while the first part of the review focuses on literature that looks at general evaluations of compliance, of the importance of FATF recommendations etc.

---

[1] As Andorno (2007) points out, soft law deals with non-binding instruments such as declarations, charters or recommendations rather than hard law, which works with binding treaties. Guzman and Meyer (2010), among others, point out to the advantages of soft law and why it exists.

General studies on FATF compliance

Technical compliance with the FATF recommendations is a very important aspect and an obvious topic of study for part of the literature. It must be pointed out first that these recommendations, despite the fact that they provide guidelines to which countries are strongly advised to adhere, they have an optional nature and are not binding unless countries actually adhere to them (FATF/OECD, 2013).

The methodology created to assess compliance with the recommendations for the countries that are willing to participate mentions clearly that the means through which compliance is measured differs from case to case. In particular,

> The FATF Recommendations, being the recognized international standards, are applicable to all countries. However, assessors should be aware that the legislative, institutional and supervisory framework for AML/CFT may differ from one country to the next. Provided the FATF Recommendations are complied with, countries are entitled to implement the FATF Standards in a manner consistent with their national legislative and institutional systems, even though the methods by which compliance is achieved may differ (FATF/OECD, 2013).

In this regard, Chatain (2009) identified arguments that consider this lack of localization of the recommendations and further stressed the need to apply the recommendations, to the best extent possible, at a localized level and with due account for the specificities of each country (as some conditions may apply less to one country and more to another).

The specificities of each state and region proved to play a special role in relation to the way in which a specific country deals with the implementation of

the FATF recommendations. The role of regional initiatives is very important because they consider implementation of recommendations based on the specificities of every region. For instance, the Middle East, unlike other parts of the world, experiences a variety of political and economic conditions that demand a different, tailored approach to changes that should take place in society in order to comply with the FATF recommendations.

This is why regional initiatives are essential for the way in which the recommendations are understood, adapted and adopted. Such initiatives include the MENAFATF (Middle East and North Africa Financial Action Task Force) (MENAFATF, 2005). Established in 2004 after a Memorandum of Understanding signed in Bahrain, this initiative set the directions for the region to address money laundering and ways in which the recommendations could improve the financial environment of the signatory parties.

The first annual report after the MENAFATF creation, in 2004-5, acknowledges the voluntary nature of the agreement and construction, but further underlines the way in which such initiatives could strengthen the institutionalization of the actions that need to be taken into account to ensure proper setup for the recommendations (MENAFATF, 2005).

Moreover, the declared aim of the MENAFATF is “developing and spreading the policies against money laundering and financing terrorism in member countries, through the implementation and application of AML/CFT international standards identified by the Financial Action Task Force “FATF” in

their 40 recommendations and the nine special recommendations as well as the related Security Council resolutions" (MENAFATF, 2005, n.p.).

Another regional initiative is the Asia/ Pacific Group on Money Laundering. "The purpose of the Asia/Pacific Group on Money Laundering (APG) is to ensure the adoption, implementation and enforcement of internationally accepted anti-money laundering and counter-terrorist financing standards as set out in the FATF Forty Recommendations and FATF Eight Special Recommendations (FATF, 2014, n.p.)."

This group is important from the perspective of the member countries, which include Afghanistan, Pakistan, and the United States among others. Such combinations allow that the recommendations and the reviews be conducted between countries that are vastly different from one another, yet having similar challenges especially considering the role of terrorism financing. This expansion of scope for the Asia/ Pacific group was also the result of the 9/11 terrorist attacks that further underlined the need to ensure a full action plan concerning the financing of terrorist activities (FATF, 2014). The activities of this group are important for the current research because they shed light on various economic environments and actions taken at those levels.

Independent bodies and members of the international civil society often criticize the methodology of assessing compliance (Global Witness, 2012). One example in this sense is Global Witness that considers the Methodology to lack the necessary actions to effectively rate the countries under analysis and, at the

same time, to promote actions at the level of the national legislations that would allow for an improvement in the financial environment. In this sense, the report from Global Witness assessing the efficiency of the methodology for the evaluation of compliance concludes that a thorough revision of the methodology is necessary. Thus, the report states that:

> There is no clear guidance on what effect implementation issues should have on individual compliance ratings, indeed the Methodology says that "effectiveness could have a positive, neutral, or negative influence on the overall rating for each Recommendation". A rating can be upgraded if effective implementation can be shown in the absence of an appropriate legal framework, but the Methodology does not discuss how a rating can be downgraded for poor implementation" (Global Witness, 2012, n.p.).

This aspect is important to the overall analysis of the FATF recommendations and how these link and impact AML/CFT, particularly because of the fact that different countries may have different systems of interpretation and different means of assessment of compliance, yet the level of approval may remain the same. In this context, for the purpose of this research, the case studies are rather important for further understanding the rationale behind the recommendations. Internal conditions are thus essential in considering the impact the level of implementation of the recommendations and the country compliance to these standards.

Political situation/political stability

A crucial aspect that influences the environment in a country and that therefore could impact FATF compliance is the political situation, particularly the

political stability in a country. Some of the studies in this area consider, *a priori*, that political stability is one of the necessary structural elements that have to be in place in order for an AML/CFT framework to have chances of being effective and successful (FATF, 2013).

There are other interesting approaches that connect AML/CFT compliance and political stability in a different manner (http://www.knowyourcountry.com). As such, in the UAE, for example, political stability, along with other factors such as economic growth and a liberal business environment, have led to an increased threat of AML/CFT activities and increased vulnerability in these areas, resulting particularly from the large amount of transactions and volume of capital flows that these factors encourage. Despite the truism in the proposition, it seems that its value of truth is superficial: one could then apply similar conclusions to other countries with high economic activities, including some of the Western countries, which are also among the best in AML/CFT compliance.

As part of the approach of this research, it is asserted that political stability can be a vital factor in determining a certain type of national environment that, in its turn, can ensure better conditions for the application of the FATF recommendations. The perspective that this paper has and that studies have pointed out is that political instability has clearly influenced the economic growth of a nation, which has induced the manifestation and spreading of such phenomena as terrorism financing or money laundering to flourish.

In this sense, according to Jong-A-Pin (2006), the different levels that he identified for political instability provide different levels of economic growth or more precisely lack of growth. This further reinforces the idea that recommendations should take into account the specificities of each country and the way in which these are reflected in the evaluation of the country.

Economic factors, conditions and overall situation

An interesting study in this area is the work of Alkaabi, et al. (2012), which uses a qualitative analysis of AML systems in four countries (Australia, United Arab Emirates, United Kingdom, United States), looking at how local cultural and economic factors play a role in the level of FATF compliance. The paper looks at the FATF mutual evaluation reports for data on the level of compliance and concludes that the UK and the US were more compliant than Australia and the UAE. The UAE was the least compliant among the four countries. The study concludes that this is related to the specific legal and financial system in the UAE, generalizing this for other examples as well.

Yepes' work (2011) argues that higher levels of compliance appear to have a direct positive correlation with the economic development of a country, taking into consideration factors such as GDP per capita. Nevertheless, some of the financial indicators she uses, particularly those reflecting the development of the financial sector, are less relevant from a statistical perspective to AML/CFT compliance.

The FATF recommendations take into account not only the activities undertaken by the states in their standard processes related to the public sector, but also deal with the private sector and how this manages to influence the actions of authorities in the business sector. The behavior of companies in the financial and economic environment offers a new degree of integrity or, on the contrary, a lack of it.

Thomson Reuters Governance, a business unit that provides comprehensive background information on various business practices, considers that the recommendations that include tax evasion are particularly important and significant for a better understanding of their requirements. On the one hand, the possible means to improve the financial practices and eventually comply with the FATF recommendations are also bearing a heavy load in the process of a better understanding. “The recently revised Recommendations, which include tax evasion and serious tax offences as a predicate offence for money laundering, add a new level of complexity for companies doing business with clients in non-compliant countries (Thomson Reuters Acellus, 2014, n.p.).”

The Unit comes to point out the major areas in which companies may be non- compliant in terms of actual consideration of the FATF recommendations and the extent to which such non-compliances can hinder the business environment. This is an important aspect to be taken into account particularly because of the increased role private companies and businesses have in

sustaining a competitive business environment that functions in accordance with the mentioned recommendations.

The recommendations, although having a voluntary nature, represent a standard for countries and companies throughout the world. It is rather common that a snowball effect ensures a wide spread of a phenomenon such as terrorism at a moment when there is a lack of containment policies. In the cases of FATF, this containment must take place at the country level and even deeper, given the multitude of cross-border connections and ties. More precisely, companies doing business in countries that have adopted the FATF recommendations must exert severe caution when dealing with them as these companies may be facing non-compliance issues and accusations (AML ABC, 2012). Therefore, it is not necessarily a matter of internal or regional compliance, but rather the smallest international entities such as the private companies need to deal with compliance issues and considerations of what the government does in the countries in which they are trading.

The definition of a political/ economic environment as being compliant with FATF recommendations can often impact states in reaching their objective of maximizing foreign finances flowing into the country. This is also a necessity in the current global context, given the increased interconnection between entities and the rapidity with which transactions take place.

This is an important aspect to be taken into account particularly because the commercial sector often undergoes severe changes at structural levels that

eventually impact the business environment and that may fuel terrorist activities or may be a starting point of money laundering processes (AML ABC, 2012). If a country does not comply with the recommendations, “the sanctions for non-cooperation are designation as a ‘non-cooperative’ territory and international finance capital steering clear (Hayes, n.d., n..p.).”

Internal and Global Governance. Rule of Law. Role of Not-for-profit organizations (NPOs)

In her research, Yepes (2011) found that “achieving high compliance requires the implementation of a combination of reforms, including strengthening domestic governance”, thus emphasizing that strong domestic governance is a factor that positively impacts AML/CFT compliance. At the same time, lower levels of control over corruption generally lead to lower levels of AML/CFT compliance. As previously discussed, the implication seems rational: lower levels of control over corruption lead to a larger volume of “dirty money” that escapes the regulated flows in the economy. Yepes’ work confirms previous IMF studies that determined that good governance improves the level of compliance.

Another important aspect related to the FATF recommendations is the connection between terrorism, financing, and not-for-profit organizations (NPOs) (Hayes, 2012). The role of NPOs has increased in recent decades, especially taking into account the way in which these have gained a substantial role in society. The theoretical perspective proposes an important role of such organizations as they represent the voice of the civil society and should have, at

least in theory, a singular role of representation of the civil society in its connections with the government as well as the private companies.

The FATF recommendations take this into account, but at the same time, look at possible ways in which NPOs could link to terrorism financing and money laundering. In this context, the recommendations consider the strength and the independent nature of the NPOs and advise on the better means of controlling the NPOs as to prevent such organizations from becoming tools in terrorism financing and money laundering (Hayes, 2012). Obviously, this is always a complicated process: a government would want to follow the FATF recommendations and control NPO financing, for example, but without taking away the legitimate freedom of these civil society representatives.

In fact, there are those that consider such links and recommendations to be out of the context of the FATF objectives and unnecessary, related to the activities of NPOs. Hayes (2012) researched the way in which FATF analyzed the financial flows to NPOs and considers the recommendations related to NPOs to have been outside the scope of the targeted aims of the recommendations.

More precisely, he points out that they have managed to create a much more difficult regulatory system in which the NPOs would have limited possibilities of financing and thus, compliance with FATF would actually hinder NPO activities and civil society in general. Better said, “The study shows that SR VIII has created a system of onerous rules and regulations that have great potential to subject NPOs to excessive state regulation and surveillance, which

restricts their activities and thus the operational and political space of civil society organizations (Hayes, 2012)."

Despite their vital role in society, NPOs require that financing be available in order to achieve their stated results. With the FATF recommendations, this financing is under severe scrutiny and reduces the NPO flexibility and dynamism in the society. Hayes (n.d.) further argues in his research that these recommendations can also be interpreted as a means of controlling NPOs and not necessarily a way of applying the same scrutiny across all elements of society.

At the same time, however, despite the fact that there are significant arguments to support such a claim, it is rather clear that the sector of NPOs/ NGOs is by definition one that can be prone to money laundering, especially considering the role financing as a tool plays in the activities of the organization. There have been numerous cases in which NPOs were used as a cover up for illegal activities in the past, hence the proper rational for considering such organizations as targets for money laundering in particular (Hayes, 2012).

However, not all NGOs should be under suspicion of foul play. There are numerous entities and organizations that have also drawn public attention to possible abuses, particularly since all NPOs are subject to the same scrutiny, regardless of their activities. Parts of the NGO community view this as an important shortcoming of the recommendations. Therefore, a series of critical assessments of these recommendations point out that there is a need for a

differentiation based on the actual situation in different countries and not an arbitrary implementation of the recommendations. Thus,

> FATF should distinguish between potential risk and actual abuse; Typologies should be based on analysis of evidence that classifies clusters of similar cases; A variety of strategies are needed to address a variety of types of abuse; Typologies should recognize the diverse structures and functions of NPOs; FATF should avoid an overbroad definition of terrorist financing; Risk mitigation procedures undertaken by the NPO sector should be recognized; Impacts on the NPO sector must be minimized (Transnational NPO Working Group on FATF, 2014, n.p.)

Case studies and analyses dedicated to this purpose looked at how legislation in various countries worked in practice in the AML/CFT field. Quaye and Coombs (2011) looked at Ghana and concluded that, while legislation was in place relatively quickly, its applicability and application was still questionable, particularly because of existing corruption and its acceptance across all layers of society.

Masciandaro (2005) starts with the paradigm according to which lax regulation, particularly lax financial regulation leaving space for interpretation, likely leads to a more non-cooperative attitude towards the international AML/CFT framework. His model empirically tests this proposition, applied to countries deemed as Non-Cooperative Countries and Territories (NCCT).

The FATF has also gathered case studies and analyses on the relationship between AML/CFT and corruption, particularly on how these are linked in a way in which the proceeds from corruption can be effectively laundered using AML/CFT mechanisms. Although not emphasized, the reverse

could also be a viable conclusion, namely that a strong control of corruption will lower the capacity for money laundering.

Beyond national governance, several studies discuss global governance in relation to money laundering and terrorist financing. Kumar's and Campbell's work (2009) is relevant in this field. Their initial assumption is that in the current context of globalization (with all the implications of global flows of information, people, capital, ideas or knowledge), local/national governance is no longer enough. The interconnection of entities and issues require global governance. They employ several theories in the field of governmental cooperation and governmental networks to examine the case of FATF. They present existing problems and propose potential solutions, such as extending existing governmental networks.

In this area of work, there are Blazejewski's (2008) studies, a work of particular interest, because it brings an additional element in the discussion about potential factors that may impact FATF compliance: international institutional cooperation. His work goes into more detail in relation to the governmental networks.

Starting with the acceptance of a North-South deficit of democracy and the current trend in international collaboration, which emphasizes the trans-governmental network as a highly efficient instrument in combating crime across borders, he argues that, in the case of AML/CFT a trans-governmental network may be less efficient on its own. It could work only in a wider framework that

includes partnerships with other international institutions. His argumentation points to the specificities of AML/CFT as the reason why such popular networks see their traditional advantages diluted and need to be supported with more instruments (Blazejewski, 2008).

A wide array of work points out both to FATF strengths and concerns related to FATF effectiveness (Hale, 2011). Some studies show that critics have seen FATF as an instrument of developed economies in their fight against money laundering (Hale, 2011). Others emphasize, in fact, the positive effect of the FATF in the global fight against terrorist financing, thanks to the FATF instruments (e.g., compliance, standards, peer review evaluations) (Gardner,2007).

An extension of these studies is the research done in determining the effectiveness of the mutual evaluations as a FATF practice. The work in this field seems to be limited to a qualitative assessment and an intrinsic conclusion that the process of mutual evaluation is useful in showing the degree of compliance to the FATF recommendations. Johnson (2008), for example, notes that the third round of FATF mutual evaluations has shown a declining compliance. Her study though is limited to a comparison of pre-2003 and post-2003 reporting of the evaluations.

Another means through which the effectiveness of the implementation of the recommendations could be assessed is the peer review of the progress countries make at the level of their own national systems. This could be a matter

of legal approach or consideration for the recommendations or a scrutiny of the political commitment to better improve the conditions in the country so that money laundering and illegal financial practices be stopped.

The review of the progress countries have made focuses on several key sectors. They include a review of the legal system with due account for the measures taken at the level of the institutions (especially the ones related to criminal activities in which money laundering has been known to represent an issue), preventive measures applied inside financial institutions, as well as non-financial organizations.

The report on the implementations of the FATF recommendations for Panama, for example, in 2014 pushes forward these areas of analysis and further adds the review of legal persons and the Not for profit sector (IMF, 2014). The review takes into account the level of cooperation the country engages in at the international level in this sense. The structure of such a review is important as a focus of study because it focuses on the precise sectors of the economy, political and legal environment that are greatly affected both by the process of money laundering as well as the effects of such a process (IMF, 2014).

However, as the report on Panama points out, the inclusion of the recommendations in the national legislation, to the extent that they become legally binding for the countries and their internal bodies, is crucial for the effectiveness of the recommendations (Johnson, 2008). In the case of Panama, the failure to include the recommendations in the form of national legislation has

brought about a series of regressive results in the application of the recommendations as a whole.

Contribution

The conclusion that can be drawn to this literature review is that there is a large volume of existing research related to the FATF structure, the FATF recommendations and level of compliance, but, in general, this research is specific to a limited area and thus incomplete. These areas include, but are not limited to, general evaluations about FATF effectiveness, studies on FATF compliance, and so on. With the exception of a few studies mentioned above, particularly Katarina Lula's, there is, to my knowledge, no work that lists a larger set of factors and aims to determine the impact that these factors have on FATF compliance. Even in this case, some of the studies that this literature review has covered look at external rather than internal factors, as the object of study, as is the case with the Lula study.

This paper sought to present a more comprehensive approach and is differentiated from existing work on several levels. First, the dissertation considers a set of five categories of determinants that group factors to reflect the situation in a country. The approach here is extremely generous, since the dissertation examines both the socio-economic situation, at the level of governance, at the level of terrorist activity and the development of institutions, reflected in good governance, rule of law or control of corruption.

The added value that this paper offers is also multi-dimensional. It follows up to the quantitative analysis with another one, more acute this time, which seeks to understand whether the general conclusions relating determinants to FATF compliance are also embraced in point in case countries. These were selected to be geographically, politically and economically representative. This paper can thus bridge an existing gap in theory, and to conclude that the general results can be confirmed by specific country examples.

V. Methodology

This chapter focuses on detailing the methodology that the research used in its approach to determine and analyze the relationship between the FATF recommendations (country compliance with these recommendations) and the economic and governance level in a country, as well as the level of terrorist activity in a country. It presents both the statistical model that are used, the dependent and independent variables and the qualitative analysis that look at a set of countries to validate the conclusions of the statistical analysis.

Data, Research Design and Overall Methodological Approach

The objective of this paper is to determine the degrees of dependencies between the level of implementation of FATF recommendations and the economic, governance and terrorist activity in a country. With that purpose in mind, the research looks at a wide array of indicators and analyzes how these indicators link to the level of implementation of FATF recommendations. The final purpose of this approach is to analyze potential correlations between all these variables (FATF recommendations on one side, economic freedom, economic activity/GDP, governance and terrorist activity indicators), regardless of a distinct economic or geographical common characteristic.

The research has a multiple regression analysis-based design. There are two primary methodological aspects that to be detailed below. On the one hand, a linear multiple regression analysis was used, first for the average level of

implementation of FATF recommendations and the five independent variables taken separately, then for the average level of compliance and all five independent variables together. Multiple regression analyses were then run for each of the 15 FATF recommendations (selected based on the assumption that they link better to the existing hypotheses) and the five indicators reflecting the economic freedom, the GDP, the level of governance and the level of terrorist activity.

The indicators used to describe the economic and governance situation in a country include Real GDP, Rule of Law, Control of Corruption, and Economic Freedom. The level of terrorist activity is described with the help of the Global Terrorism Index. The FATF 40+9 recommendations have generally been available for a minimum of 94 countries and a maximum of 149 countries. In general, the latter is true, although v34 ("Legal arrangements - beneficial owners") is only available for 94 countries and this is only one of the examples. The reason for this is generally that, in the case of some evaluations, it was difficult to obtain data and information about the compliance with a particular recommendation (such as v34 in this case). In Ghana, for example, there were no results for the nine special recommendations.

The level of compliance was obtained from the mutual evaluations that countries have undertaken within each of their geographical groups. As a consequence of the different years in which this evaluation was conducted, the data for the compliance with the 40+9 recommendations ranges from 2005 to

2012 (although many of these were completed in 2011). For most countries, as a general historical assertion, there was only one evaluation conducted since they joined FATF (this is not the case for some of the initial members, but these are limited situations and do not affect this study). For the purpose of relevance, the last mutual evaluation was used.

From the 40+9 existing FATF recommendations, 15 recommendations were used in the statistical analysis/model, as well as an average of the total 49 recommendations. These 15 recommendations included the nine special recommendations targeting terrorism financing (SRI to IX) and six other recommendations from the list of 40. They were selected based on the assumption that they are more related to the existing hypotheses, as well as the fact that they were better linked to some of the indicators. The final purpose of the paper would be to determine how the indicators that were mentioned link to the respective recommendations, as well as to the overall average.

The Multiple Regression Analysis

I ran the multiple regressions for the five independent variables, namely the index of economic freedom, the Real GDP, control of corruption, rule of law and terrorist activity. These were first done for the average level of FATF compliance and all five indicators taken together, then, for the average compliance and each indicator separately.

For each of the 15 FATF recommendations that have been selected (the nine special recommendations and the six recommendations targeting money

laundering), the multiple regression analysis was similarly completed according to the model, using all five independent variables in the same regression analysis.

Each of the five independent variables corresponds to one of the five hypotheses that have been proposed below. In Chapter 4, for each of these different situations for the 15 recommendations, explanations will be provided as to the change in the relationship between variables as a new variable is added and how the coefficient correlation changes. Another important element from the Stata output that to be discussed is the p-value, which will show how significant the empirical analysis is. If the p-value is lower than 0.05, then the null hypothesis can be rejected and the data can be labeled as significant.

The z and the t tests were used alternatively to determine the statistical significance of the results. The t-test was used when the five indicators were considered separately in the regression analysis, while the z-test was used when the regression was completed for the five independent variables taken together, as well as for the regressions for each of the15 FATF recommendations that have been selected.

Structure of the Analysis

The statistical and qualitative analysis proposed two separate sections, dealing both with the economic, governance, terrorist activity, and FATF indicators, as well as with the results of the regression analysis and the overall analysis focusing on the five countries that have been selected for the case

study. These sections will be described in general terms in the following paragraphs:

1. **General analysis of data.** This section is an explanatory section in Chapter 4 that looks at the existing data for the indicators and some of the general characteristics. Basic statistical instruments, such as the number of data instances and the highest and lowest value are introduced and discussed in order to understand the nature of the data that has been selected and its utility and applicability. This descriptive statistics analysis for the variables in the model looks at the mean, standard error, median, mode or standard deviation of the five independent variables. This is useful to understand potential high levels of variability and obtain more details about the existing data.

2. **Analysis of the variable dependencies for all countries**. Overall, this section looks at the results of the statistical analysis, including the relationships of the economic, governance and terrorist activity indicators to the average of the FATF compliance for the countries. The discussion also looks at the relevance of the relationship between the independent variables and each of the 15 recommendations. The statistical analysis will primarily look at two things: the significance of results, through t or z-tests and the correlation coefficient, which indicates the direct or inverse relationship between the indicator and the recommendation (or, rather, between the value of the indicator and the level of compliance).

3. **Analysis of the dependencies for the five specific country examples.**

In Chapter 5 of this paper, a qualitative analysis of the five countries previously mentioned is undertaken. This qualitative analysis aims to determine whether the results of the statistical analysis in the previous chapter are actually validated by this group of five countries. It also looks at some of the relationships that are noticeable between the variables, but also provides explanations for some of the fluctuations of the data, including the economic crisis of 2008.

Selection of Indicators – on the one hand, the FATF recommendations have been selected as the dependent variable. On the other hand, a series of indicators shown in the table below have been chosen as indices that reflect the economic freedom, economic development/GDP, governance and terrorism activity in a country. The idea of this selection is to be sufficiently diverse both to reflect the economic and governance situation in a country and, in particular, to allow greater opportunities for correlations with the implementation of FATF recommendations.

Name of the Indicator/Index	***Source/Institution***	***Reason for Choice***
ECONOMIC INDICATORS		
Real GDP (constant 2005 US$)	The World Bank	Shows value of economic output
Index of Economic Freedom	The Heritage Foundation The Wall Street Journal	Economic freedom
INSTITUTIONS		
Rule of law	The World Bank	Indicators of governance
Control of corruption	The World Bank	

	TERRORIST ACTIVITY	
Global Terrorism Index	Institute for Economics and Peace	Shows the impact of terrorism

Figure 1 – Indicators that Will Be Used in the Statistical Analysis

The paper starts from the assumption that each of these variables can be evaluated with respect to several existing indicators and indices. These include the ratings reflecting the level of implementation of FATF recommendations, as published through the mutual assessment processes at the FATF; the index of economic freedom, Real GDP, as well as several governance indices from the World Bank.

While it is easier to identify indicators for the level of implementation of the FATF recommendations and for several other aspects (economic output, governance) in the form of a single index, some of the indicators, such as the index of economic freedom, for example, are composite indices. Similarly, the governance indicators that the World Bank has created are also aggregated indices. As shown, for some of these, critics argue that the aggregation makes them too complicated and not necessarily sufficiently reliable. This paper argues that there are sufficient resources to support the use of the three indicators, particularly given the work that the World Bank has been doing in terms of building institutional capacity and, as such, its reputation in this area of activity.

Selection of Countries

The countries selected for the analysis include Argentina, France, Hungary Vietnam and Ghana. For each of these countries, the paper analyzes

the level of implementation of the FATF recommendations, along with the economic freedom, the GDP, the country governance and the level of terrorist activity.

The selection of these countries took into consideration several aspects, including geographic location, and political and economic considerations. The selection includes developed economies (France), developing economies with low GDP per capita (Ghana or Vietnam, interesting for the analysis both from the point of view of their economic environment and the political situation), established democracies (France) or Communist countries (Vietnam), new democracies that have joined the European Union (Hungary) etc. These countries are believed to be representative for the analysis, to the degree to which the final conclusions of the paper will objectively reflect different geographic regions and stages of economic development. We have also selected countries based on the availability of data and information (Ghana lacks the information for the level of compliance with the nine special recommendations. However, in this case, I believed that the other factors provided sufficient representativeness to include Ghana in the country selection).

Appropriateness of Design

The end goal of this research is to determine the correlation between the level of implementation of the FATF recommendations and the economic, governance and terrorist activity situation in a country, looking in particular at the links between several indicators and a group of 15 selected FATF

recommendations. As such, the proposed research design and methodological approach will use a combination of quantitative and qualitative analyses to answer these questions and to validate the hypotheses.

Arguments in favor of the appropriateness of the design include the statistical analysis that are performed to determine the correlation between several variables that reflect the mentioned elements, as well as the different statistical instruments that were applied in order to correct potential errors in the data sets.

The combined statistical analysis and qualitative research likely result in conclusions about how the variables of the study are related. A concrete numerical result of the statistical analysis, for example, can determine a positive or negative correlation between two variables. The qualitative analysis should give an explanation of the statistical analysis and regression results. It should also determine the validity of the conclusions. Finally, the qualitative analysis is also important because it provides additional explanations in the situations when the results are surprising.

Potential Threats to the Validity of the Design

The validity of the design could be contested by the potential absence of data and information for some of the countries subject to the research. This is particularly relevant when it comes to the overall statistical analysis, for all countries of the world. The research has shown that some of these have had no FATF mutual evaluation performed yet and this is reflected in a lack of FATF

data in the analysis. Other countries lack some of the other indicators. As long as the number of countries lacking some data is not too high (10 % of the total number of countries used in the analysis), this should not impact the conclusions of the study.

The selection of the five countries selected for further analysis was completed using a diverse array of factors, including political, economic, social or geographical. Despite this, the selection could have missed some other examples that could have been included. Ghana, for example, may be a politically and economically progressive example in a continent that is marred by lack of governance and economic opportunities. Despite the geographical, political and economic variety in the group of countries, some of the results may be contradictory.

Another potential threat could consist in findings, country-wise, that are too different to enable an overarching conclusion of the research, in the sense that there is a clear correlation between the variables, which is the premise of the analysis. If this is the case, the paper aims to point to different correlations that may have been identified and attempt to explain why an overarching conclusion could not be reached. Another element that could be taken into consideration for discussion is potential difficulties in the qualitative analysis, as well as in the quantitative one.

An important threat is given by the fact that some of these variables can actually be influenced by other factors, particularly in such a volatile environment

following the economic and financial crisis of 2008-2009. The threat, in this situation, is that the analysis could interpret the conclusions as an effect of the implementation of the FATF recommendations, when, in fact, it may be possible that some of the changes in the values of the indicators are the results of other factors not taken into consideration in this paper, such as internal political or economic decisions.

Some sources (Langbein, Knack, 2010; Thomas, 2009) have criticized the usefulness of the governance indicators that the World Bank uses and which have been included in this paper to validate to of the hypotheses. They point to several problems related to these indicators, including the fact that they are too complex (e.g., the control of corruption indicator aggregates as many as 23 sources) and that some are arbitrary. While acknowledging some of this criticism, I believe that they are preferable to other indicators due to the relative neutral position of the World Bank and the fact that the organization has access to a significant volume of information from all the countries included in the analysis. As such, this will likely increase their reliability.

Research Questions and Hypotheses

This paper aims to understand the correlation between internal factors in a country (referred in the paper as determinants) and the level of implementation and compliance with FATF recommendations. The dissertation focuses on understanding what factors tend to favor higher levels of compliance, as opposed to factors that have limited or no impact on compliance with FATF

recommendations. These indicators reflecting the countries' internal factors will act as the independent variables, while the level of implementation of FATF recommendations is acting as the dependent variable. This subsection of the chapter presents, explains and details the five working hypotheses of the dissertation.

H1: Rule of law has a positive impact on FATF compliance.

According to the World Bank, the rule of law is defined as an indicator that "captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence (WGI, 2014, n.p.)."

As such, a country with a high level of the rule of law indicator is perceived as having numerous positive effects on the development of a country. While several studies have focused on linking rule of law with economic growth, the understanding one has of the term "rule of law" can lead to propose the hypothesis that abiding for international assumed obligations, including for those that are perceived as soft law (such as the FATF recommendations).

Given the indicator that is used for this part of the analysis (which will be described below), rule of law is understood as an environment that offers security and a certain degree of predictability. A country with strong rule of law is seen as a country where rules and regulations are respected and implemented. This is

believed to have a positive impact on the way that legislation is followed, but also, as previously mentioned, on how international treaties are respected.

To evaluate this hypothesis, I use the rule of law index, calculated by the World Bank. This is one of the indicators that the World Bank uses as one of its *Worldwide Governance Indicators*, along with voice and accountability, government effectiveness, regulatory quality and control of corruption.

H2: The economic situation has a positive impact on FATF compliance.

The assumption is that a country with a good economic situation is likely to comply more with FATF recommendations. The perception is that the link between a good economic performance and FATF compliance is a result of the incentive to comply more in order for the financial and economic flows to be more transparent. A healthy economy will diminish the incentive to have a black market or a parallel economy. Thus, the assumption is that the country that performs well economically will have good scores on the 40+9 FATF recommendations.

Because of this, the indicator that has been selected is the Real GDP. For the GDP index, data from 2008 to 2012 is used. Despite the fact that data for GDP is available for several more years, this period of time was selected based on the fact that the mutual evaluations were generally from this period of time (2009 to 2012).

H3: A more open economy has a positive impact on the level of implementation of FATF recommendations.

The assumption is that an open economy is an economy that is more transparent. As a consequence, some of the unorthodox economic practices that can support money laundering and terrorism financing activities are more likely to be closely monitored. An open economic environment will show those economic flows that are similar to money laundering. At the same time, terrorists will prefer to finance their activities from operations in countries that are less transparent, including from an economic perspective. The fact that several of the 15 recommendations that were selected are related to the special recommendations targeting terrorist financing is interesting from the perspective of the relationship with the level of economic freedom.

The Index of Economic Freedom uses data that goes back to 2004 and up to 2014. The Index of Economic Freedom is published yearly by the Heritage Foundation and is a composite index: it takes into consideration the level of 10 different freedoms, ranging from rule of law to open markets and to regulatory efficiency. The fact that it is an aggregate indicator, other than the fact that it is more complex, has the advantage that it covers more diverse domains and is thus more reflective of the situation in a country.

H4: A country with a higher level of control of corruption will better implement the FATF recommendations.

The assumption in this case is that a country with strong institutions has more leverage and better instruments to use in implementing FATF recommendations, thus having a better level of compliance than a country that is

not able to properly implement governmental decisions regarding FATF compliance. However (and this will be more clear once the indicators used are discussed further below), this hypothesis aims to be more comprehensive than simply looking at the effectiveness of governmental institutions. It also looks at indicators that measure the rule of law and the ability of the government to control corruption, which are all important elements in evaluating a country and its fight against money laundering and terrorist financing.

The control of corruption indicator is also part of the Worldwide Governance Indicators that the World Bank publishes annually. The timeframe that was taken into consideration for the regression analysis is from 2002 to 2012, which is the most recent available information on the Worldwide Governance Indicators website. The Control of Corruption Indicator is also an aggregate, composite index. It looks both at the public opinion perception and public trust in politicians and the monitoring of corrupt activities, such as irregular payments in export and import or irregular payments in public utilities. Another interesting component of this indicator is the degree to which the country's bureaucracy is intrusive in the society, but also elements such as transparency, accountability and corruption in the public sector.

H5: A country with more terrorist activity is more FATF compliant.

This assumption is based on the fact that a country with higher terrorist activity has more incentive to comply, in order to combat the activity. One would thus expect a more efficient implementation of the FATF recommendations in

such countries with higher terrorist threat, as an additional instrument of combating terrorism. One would also expect that this Index will relate more to the SRI through IX, since these are the recommendations that particularly target terrorist financing.

The Global Terrorism Index (GTI) was used to validate this hypothesis. The Global Terrorism Index is compiled yearly by the Institute for Economics & Peace and ranks 162 nations around the world according to the impact of terrorism in a certain country. The data that was used here covers the period from 2002 to 2011. There are sufficient arguments to believe that this set of data is sufficiently relevant for the analysis. Among these, one should consider the fact that the GTI covers 162 countries and 99.6 percent of the world's population and is also a composite score (Institute for Economics and Peace, 2014).

Population

There are two separate analyses being performed herein. The first is a general analysis that takes into consideration all the countries in the world for which there is information on the different indicators previously mentioned. This is a statistical analysis, seeking to determine whether there is a relationship between these indicators and the level of FATF compliance, particularly between these indicators and specific FATF recommendations that are more related to the hypotheses. Below are the 15 FATF recommendations that were selected for the statistical analysis:

- R5- “"Customer due diligence"

- R6- “Politically exposed persons”
- R16- “Designated Non-Financial Businesses and Professions”
- R18- “Shell banks”[2]
- R27- “Law enforcement authorities”
- R38- “MLA on confiscation and freezing”
- SRI through IX targeting the financing of terrorist activities.

The second analysis used five different countries. The countries selected for the analysis were Argentina, France, Hungary, Vietnam and Ghana. This section focuses on describing the sampled countries in greater details. Of interest here are some of the macroeconomic characteristics (GDP), general characteristics (population, surface, form of government), geographical location etc. The aim of this research is to validate, with concrete country examples, the conclusions of the previous analysis.

This part of the methodology is aimed at supporting the argument that the sample countries are representative for the research. As previously mentioned, the goal of the research was to select a number of countries that are diverse in terms of all the characteristics described previously. The idea would be to use the results to draw relevant conclusions on the relationship between FATF recommendations and the economic situation, governance and the level of terrorist threat beyond country particularities.

[2] According to the FATF website, a shell bank is a “bank that has no physical presence in the country in which it is incorporated and licensed, and which is unaffiliated with a regulated financial group that is subject to effective consolidated supervision.”

France

France is a democratic semi-presidential republic, with parties competing in free and fair elections for the executive and legislative powers. It is one of the founding members of the European Union and, next to Germany, one of the engines of the EU. France is a developed country (UN Human Development Report, 2009), where its citizens enjoy a high standard of living.

France is the largest economy of the five countries analyzed in this study. Its GDP for 2012, as estimated by the IMF, was $2.254 trillion (IMF, 2013). Depending on the way the GDP is measured, France's is the second GDP in Europe and either the fifth or the ninth in the world. Its population counted 65,350,000 inhabitants, according to French National Statistics (National Institute for Statistics and Economic Studies), placing France on the 19th place in the world.

Hungary

Hungary was part of the Communist Block in Central and Eastern Europe before this form of government was overturned in 1989. Hungary is currently a market economy and a democratic republic, having transitioned from the centralized economic system imposed by the Communists. It joined the European Union in 2004 and is one of its new active members. Like France, it is a developed country with a high income economy.

Despite being severely hit by the economic and financial crisis of 2008-2009, with a recession reflected in a decrease of the GDP of 6.4 % in 2008 and the need to conclude an agreement with the IMF the same year, Hungary's GDP remains quite high, at $195.630 billion and a GDP per capita of $19,637 (IMF, 2013). Its population was around 10 million in 2012.

Vietnam

Vietnam is a socialist republic, wherein the Communist party is the only approved party. Although there are elections, these are not considered to be free and fair or to give the population a true choice when it comes to the people to represent them in executive and legislative bodies. Despite this, starting with the 1980s, Vietnam has gradually moved away from strict central planning in the economy and towards a more market-oriented economy. It opened its borders to foreign investors and became more and more integrated in regional and global economic flows. Vietnam has the largest population of all the countries that have been selected, with over 90 million inhabitants in 2012 (IMF, 2013). Its GDP in 2012 was $$320.677 billion (IMF, 2013) with a resulting GDP per capita of $1,527. All these and several other elements place it as a medium ranked country on the Human Development Index scale.

Ghana

Ghana is a democratic republic situated in West Africa. It is a medium ranked country according to the Human Development Index, similar to Vietnam, and has a population of 24.2 million, according to the census provided by the

Ghana government in 2010. Its surface is around 238,535 square kilometers, larger than Hungary's, but smaller than Vietnam's. In terms of Ghana's GDP, the estimate was $89.5 billion in 2013 (IMF, 2013), with a per capita value of $3,501.

Argentina

Argentina is a large democracy in South America. With its 2,780,400 square kilometers, its surface is the 8th largest in the world. Its population totals around 42 million inhabitants, depending on the source. It has a GDP of almost $475 billion and a per capita GDP of $18,205. Its Human Development Index is 0.811, classified as very high. It is a representative country for the Latin American continent, but also interesting because it is a large economy, but a medium to high income country.

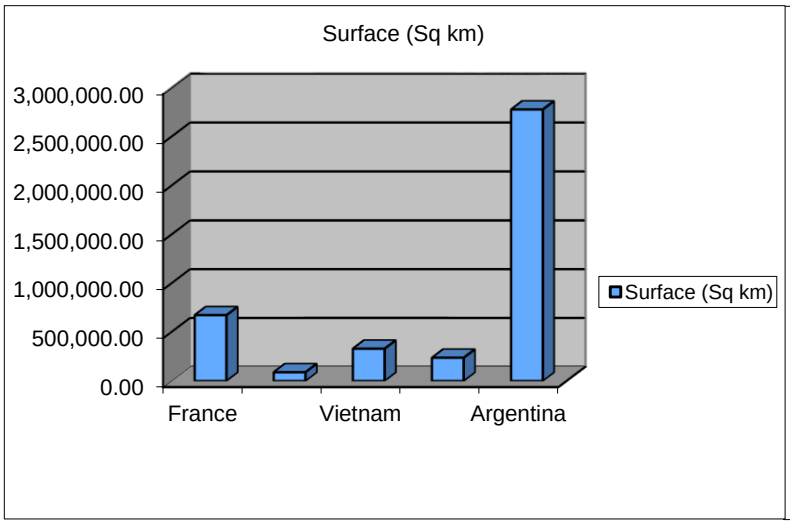
	GENERAL CHARACTERISTICS				MACROECONOMIC CHARACTERISTICS	
	Surface (Sq km)	**Population**	**Form of Government**	**Location**	**GDP - in bn $ (at purchasing power)**	**GDP per capita**
France	674,843.00	65,350,000.00	Democracy	Western Europe/EU	2,254.00	$35,548.00
Hungary	90,030.00	9,942,000.00	Democracy	Central Europe/EU	195.63	$19,637.00
Vietnam	331,210.00	90,388,000.00	Single-Party state	Asia	320.68	$3,547.00
Ghana	238,535.00	24,200,000.00	Democracy	Africa	89.51	$3,501.00
Argentina	2,780,400.00	42,192,500.00	Democracy	South America	746.93	$18,205.00

Figure 2 – General and macroeconomic characteristics of the five sampled countries

The charts below translate the variety between the five countries in terms of the population and surface. The sample includes a significantly large country (Argentina), along with several medium-sized countries (Vietnam, Ghana) and a

smaller country like Hungary. Population-wise, the sample followed the same selection methodology, with the largely populated country like Vietnam, alongside with a country that has a smaller population, like Hungary.

The sample also sought to include a country that is not a democracy, alongside the other four. The inclusion of Vietnam allows the research to analyze how FATF recommendations are implemented in a country that is a dictatorship, with a single-party political system, as well as how this impacts the governance indicators in this country. The assumption could be, for example, that once the ruling party accepts the need to implement FATF recommendations, the actual transposition of these implementation into practice is much simpler, with fewer opposing forces than in the case of a democracy and with a more controlled process. At the same time, in a country like Vietnam, it is difficult to evaluate whether the improvement of the level of implementation of FATF recommendations is a consequence of the improvement of governance ratings, although it could be easier to link to the country's Real GDP.



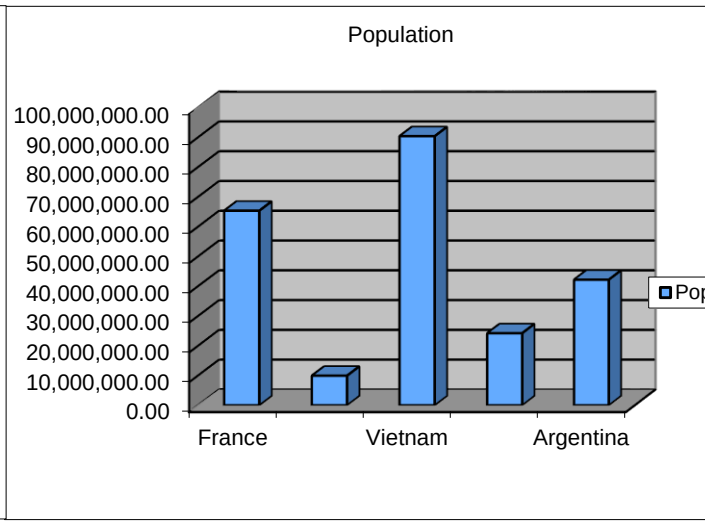


Figure 3 – Surface and population for sample countries

As the chart below shows, the size of the economy and the GDP per capita also make the countries representative for the sample. The chart depicts the fact that Ghana and Vietnam are of similar, small values in GDP per capita, while Hungary and Argentina are in the middle ranking among the five countries, with similar values (although it is interesting that Hungary and Argentina are completely different in terms of surface and population). France has been selected as the country with the largest GDP and the largest GDP per capita, significantly larger than the others and one of the largest economies in the world.

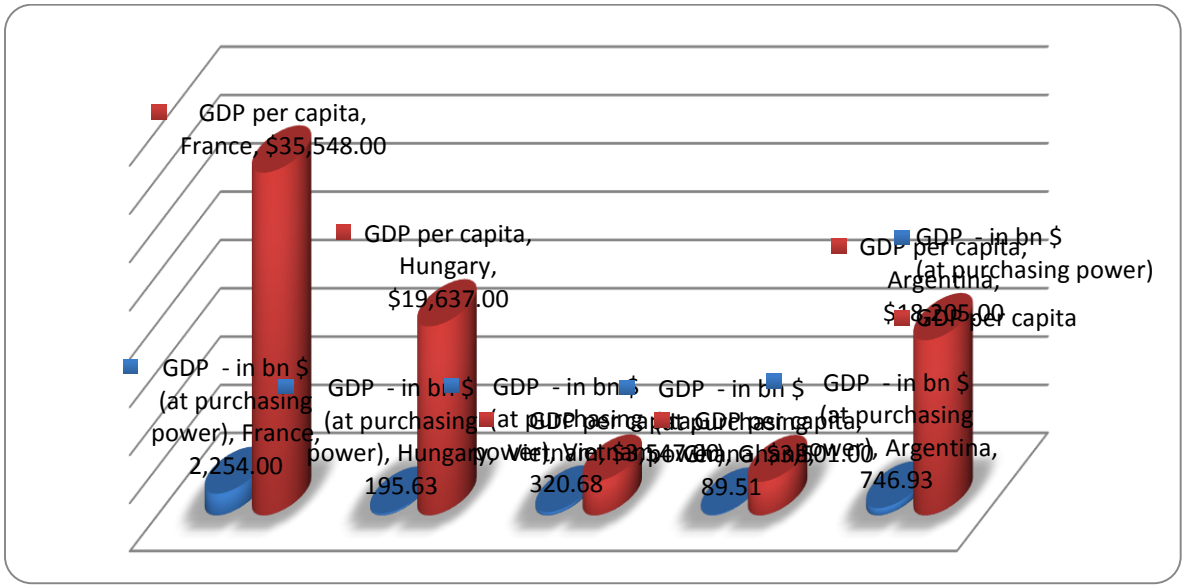


Figure 4– GDP and GDP per capita for sample countries

Sampling Frame

In order to increase the accurateness of the research, the research includes relevant data for the indicators, for periods as long as ten years. One of

the potential shortcomings results from a limited number of FATF mutual evaluations having been completed. These are usually in the 2011-2012 timeframe, while for some of the indicators, there is sufficient information for the entire interval proposed from 2002 to 2012.

Data Collection

1. Implementation of FATF Recommendations:

The implementation of the FATF recommendations is measured quantitatively based on the scale proposed by the FATF. This includes compliant (C), largely compliant (LC), partially compliant (PC), non-compliant (NC). For the statistical analysis, each of these ratings receives a corresponding number that can be included in a statistical regression, as such: C-4, LC-3, PC-2 and NC-1. The result is an ordinal variable, which is the study's dependent variable.

All this information is available on the FATF website at http://www.fatf-gafi.org/ and all the mutual evaluations are included among the documents of the website. The website is also very well organized: countries can be accessed via a menu and, for each country, the website displays the information available for the respective country. Of these documents, the one of most interest is the mutual evaluation, which shows the compliance of the country with the different FATF criteria. An important part of the data collection section for the implementation of FATF recommendations will reflect the understanding of the process, how the evaluations are made for each country in part and what the scale and mentioned ratings actually reflect.

The motivation of this part of the research is to argue credibly in favor of using the mentioned rating system as a way of reflecting the level of implementation of FATF recommendations in a country. Interviewing more experts, preferably from the countries that are the object of study here, will be relevant in understanding how the system works and why this is a proper way of evaluation.

2. Governance Indicators/ Strength of institutions

The information for the strength of institutions was collected from Worldwide Governance Indicators (WGI), where the full dataset can be downloaded for all the six indicators that the World Bank takes into consideration when analyzing the level of governance in a certain country. Data from 2002 to 2012 was used for all three indicators.

Kaufmann, Kraay and Mastruzzi (2010) explain how the six dimensions of governance according to the World Bank are assessed. According to them, each of the country is given, after research, data aggregation and analysis, a score between 0 and 1, with 1 being the best outcome. The information about a country is compiled from multiple sources, according to a linear function. The result, on a different scale, places the respective governance indicator on a scale from -2.5 to 2.5, but also, in percentile rank terms, from 0 to 100. The study will use the scale from -2.5 to 2.5, while 2.5 will be the best performer and -2.5 the lowest score. These indicators are particularly relevant for the qualitative

analysis, with explanations attempted for each of the country as to why the indicator varies and how this can explain the level of compliance.

For all governance-related indicators that this paper uses (government effectiveness, rule of law, control of corruption) the data compiled from the World Bank website ranges from 2002 to 2012.

3. Economic situation

Information about the GDP, ranging from 2008 to 2012 has been obtained from the World Bank database (http://data.worldbank.org). The GDP expressed in current USD (GDP at purchasers' prices) was preferred. For the Index of Economic Freedom, the website of the Heritage Foundation was used, where data is available from 2004 to 2014.

4. Economic freedom

The index of economic freedom was used as a composite index that would reflect the degree to which a country interacts commercially with others, how open the business environment is etc. it is important that this is a composite indicator, reflecting several various economic areas, including trade and openness of the market. It will have an impact both on the conclusions and on the potential policy implications.

5. Terrorist activity

The data for the Global Terrorism Index were collected from the website of the Institute for Economics and Peace, with a focus on the period from 2002 to 2011. One should also highlight that the most recent report from the Institute is

from 2014 and is a useful instrument for an overall analysis of terrorist activity in the world. The data, however, was selected again to match the existing mutual evaluation reports.

Data Analysis

The analysis of the data was completed from three perspectives:

(1) a general evaluation of existing information and data. This was not the most important part of the data analysis process, but is relevant in determining the availability of existing information, the degree to which the data and information can be used in the statistical methodology proposed in this chapter etc. This part of the analysis looked generally at the number of years for which the required information is available, and how the data varied during this period of time. This preliminary analysis is useful to understand whether the data being used is relevant (large fluctuations, for example, may mean that the respective data set is not usable).

(2) discussion of the statistical analysis results. This was a more thorough and detailed analysis that looked at the results of the regression analysis, and permitted general conclusions about the relationship between the implementation of FATF recommendations and the sets of data that reflect the countries' internal conditions. There are two components for this discussion: the evaluation of the set of data, with general discussions related to the median, mode or mean and the evaluation of the results of the regression analysis, with a

more detailed look at the correlation coefficients and the significance levels for each of the 15 recommendations taken into account and their overall average.

(3) discussion of country-specific regression analysis results. For each of the five countries previously mentioned, a qualitative analysis was performed to understand whether specific country examples validate the results of the study. The objective of this exercise was to understand whether the general results are confirmed by specific country examples. A further discussion is provided to illustrate why some of these situations occur.

Validity and Reliability

There are several issues of interest in the case of validity and reliability of the information: the validity of the raw data; the validity and reliability of the regression analyses being performed; reliability of the conclusions that are drawn after the analyses, as well as the limitations of these analyses; the validity of the country-specific analysis.

In terms of the validity of information, the sources used are all reliable sources -notably the World Bank, the IMF, other institutions and websites, as well as the conclusion of the mutual evaluations between countries, reflecting the degree of implementation of FATF recommendations. All these are valid and reliable sources, reflecting, without bias, actual results of evaluations.

However, some of the indicators, such as the Index of Economic Freedom, compiled by the Wall Street Journal and the Heritage Foundation, have been contested by researchers pointing out their limitations. This risk is mitigated

in this study by the large volume of indicators that are used, although the Index of Economic Freedom reflects a particular area of interest of the economic situation in a country. Ideally, the use of more indicators could bring additional credibility to the conclusions.

In the case of the reliability of the interpretation and analyses, the limitation of the study was that it is difficult to draw conclusions as to whether the dependent variable is influenced, in reality, by one of the independent variables. Good governance, for example, may positively influence the implementation of FATF recommendations, but, in reality, it is more difficult to answer whether this influence is singular or whether there are other variables that actually play a much more important role, including variables that have not been taken into account in the study. So, the main issue with the reliability of interpretation and analyses is that, while the statistical analysis may show some relationships, it is difficult to conclude whether these are universal and can be extrapolated.

Another reliability issue could result from the qualitative analysis. Indeed, the country-specific examples may not validate some of the statistical results. An analysis needs to be undertaken as to why this is the case. At the same time, this could also represent some area of future work and study, perhaps taken into consideration other indicators as well.

Summary

The paper proposes the use of statistical analysis, primarily a regression analysis, in order to link the implementation of the FATF recommendations with

several factors that reflect the internal situation in a country, including the economic situation, level of terrorist activity and level of institutional governance. The research has selected several indices that are considered relevant, proposed by the World Bank, The Heritage Foundation and other reliable sources. Many of the indicators were composite indicators, taken as such from reliable institutions such as the World Bank or the IMF.

A first part of the analysis looks, in part, at the relationship between the level of implementation of FATF recommendations, particularly 15 FATF recommendations (the 9 special recommendations and 6 others assumed relevant for the study, as well as an overall average) and all relevant indicators reflecting the categories mentioned previously. The regression model looked at the significance and correlation between indicators and FATF compliance average, then, subsequently, the significance and correlation between the indicators and 15 selected FATF recommendations.

For the qualitative analysis, a sample of five countries was selected, depending on general and macroeconomic indicators. The primary goal was to have a sample of countries as representative as possible for the study. With this in mind, diversity was the primary criterion for selection: the five countries are from all continents of the world, have different population sizes, different GDPs and surfaces. This diversity will likely translate in an objective correlation analysis that will delink the conclusions from any potential common characteristics that all these countries might share.

V. Statistical Analysis

Statistical and descriptive analysis of Data

- *Index of economic freedom*

The index of economic freedom has 178 observations and its values range from 28.125 (minimum) to 89.67 (maximum). The mean value is 59.45, while the median is at 58.24 %. The skewness for the index of economic freedom is positive, although very close to 0, so it shows extreme values to the right and most values on the left of the mean, but, because it is so close to 0, an almost symmetrical structure around the mean. The kurtosis is 3.58, pointing to a leptokurtic distribution, somewhat sharper than the normal distribution and with thicker tales.

- *Real GDP*

There are 194 observations for the Real GDP. Real GDP has a median value of 23.8 billion and a mean of 33.4 billion. The maximum value is of 15 trillion, while the minimum of 3.2 billion. Certainly, the fact that this data series refers to the Real GDP makes some of these values very large, something that is also reflected when it comes to the skewness and kurtosis. Large skewness and kurtosis figures show a right-skewed distribution, with most values to the left of the mean and extreme values to the right. At the same time, we have thicker tails and values concentrated around the mean.

- *Rule of Law*

There are 213 observations for the rule of law indicator, with a minimum of -2.38 and a maximum of 1.94. Similar to the control of corruption indicator, the rule of law indicator is on a scale going from -2.5 to 2.5. The mean is close to 0, although slightly negative (-0.011), while the median value (the 50th percentile) is -0.14. The skewness is also positive, similar to the control of corruption, showing a right-skewed distribution, with most of the higher values to the right and most of the values concentrated to the left of the mean. The kurtosis is lower than 3, showing a platykurtic distribution, one that is flatter than the normal distribution and with the values more arranged around the mean. Although this is not the object of this paper, one can notice the resemblance in terms of the main descriptive statistics for the governance indicators.

- *Control of Corruption*

The Control of Corruption Index has values from -2.5 to +2.5, with -2.5 being the lowest possible value and 2.5 the highest value. There are a total of 211 observations. The mean value -0.0089, so, quite close to 0, which is the half-value of the scale's interval. The median value is -0.26, which is also the 50 % percentile. The maximum value of this indicator is 2.45, while the smallest value is -1.71: this is interesting, because it tends to show that, while the highest values are almost as high as the upper limit of the interval, the smallest values do not go as low as -2.5 or even -2.0.

The skewness and the kurtosis for this data set bring additional information. The skewness is 0.665, which is greater than 0 and, thus, shows a right-skewed distribution, with most of the higher values to the right and most of the values concentrated to the left of the mean. This is confirmed by the values for the percentiles. The kurtosis is 2.67, showing a platykurtic distribution, one that is flatter than the normal distribution and with the values more arranged around the mean.

- *Global Terrorism Index*

The Global Terrorism Index scores from 0 to 10, with 10 being the highest and some countries scoring 0. There is a total of 138 observations, with a mean value of the scores of 2.097. This tends to show that the mean global terrorism index is smaller rather than higher, showing that, in general, there is lesser terrorist activity in the countries around the world. This probably reflects, statistically, the fact that there are few observations/countries with high scores and that most of the countries have low terrorist activity.

The median corresponds to the 50th percentile and is 1.22, again, quite low on the global terrorism scale. The maximum value in the set of data is 8.677, with the smallest value 0.014. The data set has a standard deviation of 2.165, showing the distance of the values from the mean. The skewness of 1.14 confirms the fact that most of the values are situated to the left of the mean (2.097), and that these are mostly lower values, with the extreme values to the right. The kurtosis is 3.26, showing a leptokurtic distribution (since the value is

higher than 3), with many of the values concentrated around the mean, with thick tails.

Regression analysis average FATF compliance with all five independent variables

The regression analysis was first run with the average of the level of implementation of FATF recommendations and the averages of the five indicators (Index of Economic Freedom, Real GDP, Rule of Law, Control of Corruption, Global Terrorism Index) as the five independent variables.

The p-coefficient for this regression is only smaller than 0.05 for two of the independent variables (Index of Economic Freedom and Real GDP). These values for the p-coefficient show significance of results for these two indicators. For the other three indicators, namely the governance indicators and the global terrorism index, the p-coefficient is larger than 0.05, showing that the results are not significant.

However, in this case it is more useful to look at the results of the z-test. We use a critical value of 1.96, which would mean that, for this two-tailed test, if Z is less than -1.96 or greater than 1.96, we can reject the null hypothesis and the results are significant. The Z-test results are less than -1.96 or greater than 1.96 for the index of economic freedom and for Real GDP, with the governance indicators and the global terrorism index in-between the interval. With this in mind, the correlation claim appears not to be significant for the governance indicators and the global terrorism index, but accurate for the index of economic

freedom and the Real GDP, with very small corresponding p-values that tend to show the statistical significance of the pattern.

Moving to the correlation coefficient, this is positive, although small, for both independent variables that have significant results. This shows that the relationship between the Real GDP and the index of economic freedom and the level of compliance with FATF recommendations is a direct relationship.

For the governance indicators (rule of law average and control of corruption average), the results are interesting, but different. The rule of law average has a negative correlation coefficient, as compared to the average level of implementation of FATF recommendation. This translates into an inverse relationship, which would mean that the level of compliance with the FATF recommendations increases as rule of law decreases. This could have, from a logical perspective, a single explanation, namely that the processes for the FATF compliance are more technical than judicial. The negative correlation coefficient could induce the idea that the more flexible the judicial and legal framework is, the more chances are for the technical details to be solved and properly implemented in order to comply with the FATF recommendations.

For the control of corruption, the correlation coefficient is positive and very high (0.85). This shows that the relationship between the control of corruption and the implementation of FATF recommendations is direct and very strong. The explanation would be that the level of compliance and the control of corruption tend to move together and the tougher the control of corruption is, the

better the recommendations are implemented. This tends to follow on the pattern of what has been previously discussed, namely that, since many of the recommendations are related to money laundering and to terrorism financing and, thus, apply to banks and other financial institutions, as well as financial operations, it is essential to have a rigorous system in place that ensures corruption does not contribute to problems in these areas. The problem in both cases is that, according to the z-statistic, the results are not significant.

Regression analysis with average FATF compliance and each independent variable

Subsequently, each of the independent variables was run in separate regression with the average of the level of implementation of FATF recommendations. The average value of each of the independent variable was considered in this regression analysis and the t-statistic was used to test the hypothesis and understand whether the results are significant. One should remember that the t-statistic is obtained mathematically by dividing the correlation coefficient by the standard error, where the standard error is an estimate of the standard deviation of the coefficient. As such, we will look at the absolute value of the T-statistic and will compare it to 1.9673, which is the critical value corresponding to the 0.05/5% significance level that we are using.

In our case, all of the independent variables, except the global terrorism index (which is -0.49), have a t-statistic score that is larger, in absolute value, than 1.9673. For all of these independent variables, we can reject the null

hypothesis. For the global terrorism index, the null hypothesis cannot be rejected. As such, we will subsequently look at the correlation coefficient for the governance indicators, for the Real GDP and for the index of economic freedom.

All of these correlation coefficients are positive, showing a direct relationship between each of the indicators and the level of implementation of FATF recommendations. However, they are also very small, so the relationship between these indicators and the level of compliance is not necessarily very strong.

As a short conclusion following the regression analyses run, subsequently, with all the average independent variables and with each independent variable in part, one can show that the results are more conclusive when it comes to the regressions that were run with <u>all</u> independent variables and that, in the respective, case, one can point to a direct relationship, although not very strong, between the Real GDP and the economic freedom indicators and the level of FATF compliance. At the same time, this conclusion, in terms of significance and correlation, was also confirmed by the regression run with each indicator separately. The only additional aspect is that the correlation coefficient, in either case, is usually not very high, showing that the relationship is not necessarily very strong.

Regression of 15 selected recommendations and the five independent variables

For each of the 15 recommendations that have been selected based on the supposition that they were likely to better relate to the existing indicators, separate regressions were run for the recommendation and all five independent variables. In each case, the z-test was used in order to determine the significance of the results, with the confidence level at 95 % and the assumption that, at a critical value of 1.96 for this two-tailed test, if the z value is greater than 1.96 or less than -1.96, the results are significant, since the p-coefficient will be sufficiently small to show a statistically significant pattern. For the statistically significant results, the correlation coefficient will also be discussed to understand whether there is a direct or inverse relationship between the indicator and the level of implementation of the respective recommendation.

R5-“Customer Due Diligence”

For this recommendation, the only significant result is that for the index of economic freedom, which has a z-test score of 2.51 and, thus, a sufficiently small p to reflect statistical significance. The correlation coefficient in the case of this recommendation is 0.06, showing a direct relationship between the index and the level of compliance with this recommendation.

R6-“Politically Exposed Persons”

For all of the indicators in the case of this recommendation, the values of the z-score are in the interval -1.96 to 1.96, so the z-score is not sufficiently high in order to show a statistically significant result.

R16-“Designated Non-Financial Businesses and Professions”

The index of economic freedom has a z-score that is sufficiently high (2.72) to make the results statistically relevant. For the index of economic freedom, the correlation coefficient is positive, showing a direct relationship between economic freedom and the level of implementation of R16. For the other indicators, the z-score is too small to make the results statistically significant.

R18-“Shell Banks”

None of the five independent variables have a z-score sufficiently large to show statistical significance in relation to the implementation of R18.

R27-“Law enforcement authorities”

The Index of Economic Freedom and the Control of Corruption have high z-scores that show statistical significance with regards to the implementation of R27. The correlation coefficient is positive in both cases, showing a direct relationship between each indicator and the level of compliance with this recommendation. From a logical point of view, one would expect a high control of corruption to play a positive role in the implementation of a recommendation related to law enforcement authorities. For the other indicators, the z-score is too small and does not show statistical significance.

R38-“MLA on confiscation and freezing”

The z-score is larger than 1.96 for three of the indicators, namely the index of economic freedom, the control of corruption indicator and the global terrorism index. For all of these indicators, the correlation coefficient is positive, showing a direct relationship between the level of compliance with R38 and these indices. It shows that the higher the economic freedom in a country, the better the control of corruption and the higher the global terrorism index, the higher the level of compliance of R38. The other two indicators (Real GDP and Rule of Law) have a z-score that show the results are not statistically significant.

SR.I-“Ratification and implementation of UN instruments”

Three of the five independent variables have a high z-score that points to a statistically significant relationship. These are the index of economic freedom, Real GDP and the Control of Corruption index. For all these three indicators, the correlation coefficient is positive, showing a direct relationship between these indicators and the level of compliance with SR.I. For the other two indicators, the z-score is too small to show statistical significance, although one would have expected this for the Rule of Law indicator, which tends to govern the judicial framework of a country, including its international treaty commitments, such as the ratification and implementation of UN instruments.

SR.II -“Criminalizing the financing of terrorism and associated money laundering”

The index of economic freedom and the Real GDP have a z-score that is sufficiently high to showcase that the results are relevant. In both these cases,

the correlation coefficient is positive, although small, showing a direct relationship between the two indicators and the level of compliance with SR.II. For the governance indicators and the global terrorism index, the z-score results are too small to have statistically significant results.

SR.III-“Freezing and confiscating terrorist assets”

Large z-scores, corresponding to small p-coefficients and showing statistically significant results, were obtained for the global terrorism index, the control of corruption and the index of economic freedom. For all of these, the correlation coefficient is positive, showing a direct relationship between these indicators and the level of implementation of SR.III. The Rule of Law and the Real GDP have smaller z-scores and the results cannot be considered as being significant.

SR.IV – “Reporting suspicious transactions related to terrorism”

Only the index of economic freedom had a large enough z-score (3.33) in the regression analysis with the level of implementation of SR.IV, showing statistical significance. All other four indicators have z-scores that are in the -1.96 to 1.96 interval and, as a consequence, the results cannot be considered as statistically significant. The correlation coefficient for the index of economic freedom was positive, although small. This shows a direct relationship between this indicator and the compliance with SR.IV. In this case, given the nature of SR.IV (“reporting suspicious transactions related to terrorism”), it is surprising

that the z-score for the global terrorism index does not how statistical significance.

SR.V – “International co-operation”

The z-score is again over 3 (3.19) for the index of economic freedom. For this score, the correlation coefficient was positive, although small. The positive correlation coefficient showed a direct relationship between the index of economic freedom and the compliance with SR.V (“international co-operation”). For the other indicators, the z-score is between -1.96 and 1.96, which tends to show that there is no significant statistical pattern to reflect the data. However, one can note that the z-score for the global terrorism index is 1.95, close to 1.96.

SR.VI – “Alternative remittance”

The index of economic freedom is the only indicator that has a z-score that is sufficiently large (2.65) to have a p-coefficient that would show statistical significance. For the index of economic freedom, the correlation coefficient is positive, although it is only 0.07. This shows a direct relationship between the index of economic freedom and the level of compliance with SR.VI. For all the other four indicators, the results are not statistically significant.

SR.VII – “Wire transfers”

The z-score for all five independent variables is between -1.96 and 1.96, which shows that there is no statistical significance for the relationship between any of these indicators and the level of compliance with SR.VII – “Wire transfers”. This is somewhat surprising, since SR. VII deals with wire transfers and, as a

consequence, with monitoring foreign remittances, fund transfers and foreign exchanges. One would have thus expected some sort of statistically significant relationship between this special recommendation and the index of economic freedom or Real GDP.

SR.VIII – “Non-profit organisations”

For the index of economic freedom and the Real GDP, the z-score is larger than 1.96, showing statistical significance. The correlation coefficients are both positive, showing that there is a direct relationship between both indicators and the level of compliance with SR.VIII. This would mean that the higher the economic freedom of a country and the greater the GDP/the more developed the economy, the better will the countries implement this special recommendation that focuses on the potential misuse of non-profit organizations funding for the financing of terrorism. However, it is interesting that the governance indicators and the global terrorism index all have a z-score that is too small to make the results statistically significant. One would have likely expected that at least the global terrorism index should have more significance in relation to the implementation of a special recommendation related to misuse of NGO funding for terrorism activity.

SR.IX – “Cash couriers”

Real GDP is the only one of the five independent variables that has a z-score that shows statistical significance. For the Real GDP, the correlation coefficient is positive, although very small, showing a direct relationship between

the GDP of a country and the level of implementation of this recommendation. For the other four indicators, the results do now show statistical significance. One would have expected the index of economic freedom to have a higher z-score, since the openness of the economy determines the degree to which a country interrelates, commercially and economically, with other countries and this special recommendation focuses particularly on “detecting cross-border transportation of currency”.

Conclusions

For the regression analyses that were run between the average of the compliance with FATF recommendations and each of the five independent variables in part, the t-score shows statistical significance for four of the independent variables (index of economic freedom, Real GDP, control of corruption and Rule of Law), with all of them having positive correlation coefficients. The conclusions is thus that when the regression analysis is undertaken for each indicator separately, there is statistical significance and a direct relationship between the index of economic freedom, the Real GDP and the governance indicators and the level of compliance with FATF recommendations.

This conclusion is only partially confirmed when the regression analysis is concluded <u>with all five indicators</u> and with the average level of implementation of the FATF recommendations as the dependent variable. In this case, the z-score was used for statistical significance and this yielded statistically significant

values only for the index of economic freedom and the Real GDP. For both these indicators, the correlation coefficient is positive, showing a direct relationship between each of the indicator and the average level of compliance in a state. So, the results are consistent only for the index of economic freedom and the Real GDP.

In terms of the relationship between the five independent variables and the level of compliance with each of the 15 FATF recommendations previously mentioned, the best way to analyze the results and draw relevant conclusions is to group together the recommendations for which the z-score show results that are significant and attempt to analyze patterns that can be noticed.

In general, whenever the z-score is sufficiently high or low to show statistical significance, the correlation coefficient a positive, showing a positive relationship between the respective independent variable and the compliance with that recommendation or special recommendation. The index of economic freedom is generally the independent variable that has consistently significant results and positive correlation coefficients. The results for the index of economic freedom in the various regressions show that countries with a more open economy tend to better comply with most of the special recommendations.

This is consistent with what an open, free economy means, including as reflecting this index. The index reflects business, trade and fiscal freedom, as well as investment or financial freedom. These are also countries with a low level of governmental involvement in business and with low governmental spending.

Moreover, these are countries that are strongly involved in international economic and commercial flows, as a reflection of their internal economic freedom.

So, for this type of country, one would expect more attention to be given to the implementation of FATF recommendations, particularly those that govern international exchanges and financial flows. This is partially reflected by the results, although it is surprising to note that some of the special recommendations, such as that referring to wire transfers, do not necessarily render statistically significant results.

Real GDP had high z-scores for several recommendations and positive correlation coefficients, but, in general, it is difficult to draw a definite conclusion on whether the size of the economy drives the compliance with certain recommendations. At the same time, the correlation coefficient is usually quite small, so, any direct relationship is generally not very strong.

Some of the other independent variables, such as the global terrorism index, only render statistically significant results in a few instances. One of these is related to the implementation of SR.III-“Freezing and confiscating terrorist assets”. For this, the correlation coefficient is also positive and significantly higher than usual, showing that a country with a high global terrorism index will have a greater incentive to freeze and confiscate terrorist assets, particularly since the global terrorism index reflects terrorist activity in a country.

Surprisingly, the governance indicators generally show results that are not statistically consistent, with a z-score that is generally too small to reflect a pattern. The control of corruption indicator sometimes yields statistically significant results, with a positive correlation coefficient, such as for the recommendation regarding law enforcement authorities. This tends to show that one expects that a high level of control of corruption in a country will ensure a better implementation of the recommendation regarding law enforcement.

VI. Qualitative analysis – country case study

General presentation

This chapter presents a qualitative analysis of the relationship between the socioeconomic indicators and the level of implementation of FATF recommendations. For this qualitative analysis, a group of five countries was selected: Argentina, France, Hungary, Ghana and Vietnam. The criteria according to which the countries were selected included:

- *Geographical location*. The aim was to have a representative geographic distribution, so countries from all continents (Latin America, Asia, Africa and Europe) were selected. The geographical location is interesting from a qualitative analysis perspective, because it may show particular continents performing better in overall compliance. Countries from Europe, for example, are also part of the European Union, which would tend to show that there are certain regulations that they have to implement.
- *Economic development*. The sample included developed countries that are part of the European Union and are developed economies (France and Hungary), as well as developing countries (Vietnam, Ghana). The reason, as previously mentioned, is to make the sample as representative as possible. This selection according to economic development is also useful to understand whether the index of economic freedom play a role in FATF compliance for these countries.

- *Size of the economy*. The sample included one of the largest economy in the world (France), a small African economy that had high growth rates over the last years (Ghana), a Communist country with a market economy (Vietnam) and an economy that has suffered from the effect of economic crisis over the last decade (Argentina).
- *Political structure*. The countries that were selected included established democracies (France), countries that have changed regimes in the last decades (Hungary, turning from a Communist to a Capitalist regime), Communist dictatorships (Vietnam) etc. Political structure could impact the way the government implements FATF recommendations, especially related to indicators such as Control of Corruption and Rule of Law.
- *Size of the country and of the population*. The sample combined small countries (Hungary, Ghana), with large countries (France, Argentina), as well as countries with large populations (Vietnam).

A general overview of the data shows that there are enough observations for the selected indicators (Real GDP, control of corruption, rule of law), including from a timeframe perspective (from 2002 to 2012 for all these indicators), as well as the index of economic freedom and the global terrorism index. The subchapters below will look at each of the indicator for each country in part and analyze it in relation to the level of implementation of FATF recommendations.

The analysis also examines the level of compliance for each country in part, particularly at the average for all 40+9 recommendations and at some of the

high/low values. The chapter discusses how these countries have performed for each of the 15 recommendations that were included in the statistical analysis in chapter 4.

This chapter draws some conclusions regarding which of the recommendations are easier to implement (related to how many countries obtained a score of full compliance) and where problems appear, with potential causes for these implementation problems. The final purpose of the chapter was to validate the conclusions obtained in chapter 4, both in terms of the statistical significance (or non-significance) of the data and the positive/negative correlations, showing direct or inverse relationships between the indicator and the general level of compliance or level of compliance with each of the 15 recommendations in discussion here.

Qualitative analysis of data

- *Implementation of FATF recommendations*

This subsection of the chapter analyzes the average level of implementation of FATF recommendations, as reflected for the mutual evaluations for these five countries. It also looks into more detail at the 40+9 recommendations and how each of these is implemented. The aim of this exercise is to understand where each country is performing better. This information can also be used in the subsequent sections, to understand whether some of the indicators appear to favor the implementation of particular recommendations.

First of all, in terms of the average compliance with FATF recommendations, the following patterns can be identified: two of the countries (France and Hungary), have average compliance figures around 3 (France has 2.82, while Hungary has 3.10), which tends to reflect the fact that, overall, in average, each are largely compliant, at an overall, average level, with the 40+9 recommendations. As a complementary note, in the overall list of countries, both Hungary and France score relatively high, with Hungary having one of the few scores over 3. This gives a relative perspective on how well each country performed in terms of FATF recommendations, given the fact that no country from the large group scores over 3.5.

Of the group of five countries, Hungary and France are the most developed economies, each country being a member of the European Union. As members of the European Union, these countries had to implement a special set of rules and regulations, referred to as the acquis. This could have potentially facilitated a better implementation of the FATF recommendations, although it is difficult to assess the degree to which membership to the EU plays a role in implementing FATF recommendations.

This idea appears to be supported by some of the recommendations for which both countries scored 4 (compliant), which are generally in the legal and judicial areas. These recommendations include secrecy laws consistent with the recommendations, protection legislation and no tipping-off or legislation defining

the powers of the competent authorities, as well as other recommendations from these fields.

A second category of countries (Vietnam, Ghana and Argentina) have average compliance levels that are lower than 2, with Ghana the lowest (1.41) and Argentina (1.80) the highest of the group. These average levels are equivalent to a level of compliance ranging from non-compliance to partial compliance. Of the group of five countries, these are developing countries, many of them still in a process of institutional building and still having specific economic problems. The political will to implement FATF recommendations is limited, likely because of the challenges that authorities in these countries face in other areas from the economic or financial sectors.

A country analysis will show interesting details about how each of the recommendations is implemented in the five countries. Argentina has two recommendations that it is fully compliant with: R19 (Other forms of reporting) and R37 (Dual Criminality). One more of the 40 recommendations is rated with a 3 – Largely Compliant (R.28-Powers of competent authorities), as well as 5 out of the 9 additional nine recommendations, aimed at combating terrorist financing.

This is interesting to note: although Argentina does not do a formidable job of implementing the initial 40 recommendations primarily aimed at combating money laundering, the recommendations for combating terrorism financing are better implemented, despite the fact that 3 of these additional recommendations are not implemented (Argentina received a NC-non compliant grade for each of

them). The new attention paid to terrorism and terrorist activity in the world in the post-2001 period could explain the better implementation of CFT recommendations in the case of Argentina, as well as some of the other countries in the sample.

An analysis of these 9 CFT recommendations also reveals other interesting information: Argentina does well particularly for those recommendations that imply legislative or judicial action rather than in direct operational action. For example, it scores 3 for ratifying and implementing UN instruments and for criminalizing the financing of terrorism and associated money laundering. Recommendations related to operational actions such as reporting suspicious transactions related to terrorism (which implies that these transactions are properly monitored) or monitoring the financial activities of NGOs are more difficult to implement.

Most of Argentina's compliance scores are 1 (non-compliant) or 2 (partially compliance). It shows that the process of implementation is still incipient in Argentina and that there is still significant work to be done. For future studies, it would be interesting to look at some of the follow-up reports after the mutual evaluation, qualitative analyses of how the implementation improved over time. Implementation is often related, in its incipient stages, to political will, and this could be lacking in Argentina at this moment.

France is a developed country, not necessarily only economically, but institutionally as well. As such, it has scored a much higher number of 4

(Compliant) than Argentina, namely 7. There are only three recommendations where France scored 1 (non-compliant) and 2 of these are of the 9 recommendations to combat terrorist financing. These latter include criminalizing the financing of terrorism and associated money laundering and wire transfers. These results tend to show that even a country like France is still struggling to implement effective recommendations to combat terrorist financing. At the same time, for 5 of the 9 CFT recommendations, France scored 3 (largely compliant).

The other European country, member of the European Union, Hungary, is the best performer of the group and one of the best overall performers of all the countries being analyzed. It is the only one to score 2 scores of 4 (compliant) for the 9 recommendations targeting CFT (for wire transfers and for alternative remittance). It also scored the largest number of 4s from the group (22 scores, including R.9-third parties and introducers and R.30-resources, integrity and training, for which the other countries scored significantly lower).

Vietnam scored an average of 1.69, placing it in the group of countries that scored lower than 2. The level of compliance is thus somewhere between non-compliant and partially compliant. Like some of the other developing countries, Vietnam is non-compliant with most of the 9 recommendations to combat financing terrorism, likely showing that the country is either not yet prepared or not committed to implementing these recommendations. It scored only one 4, for R.19 – Other forms of reporting. As previously mentioned, the fact

that all countries scored the highest compliance score for this indicator could show that this recommendation is easier to implement it than some of the others.

There is no compliance in Vietnam with some of the important recommendations, such as special attention for higher risk countries, correspondent banking or internal control, compliance and audit. As in the case of the other developing countries, one could conclude that the acceptance of the importance of FATF recommendations and political commitment to implement these are still in an incipient stage.

Ghana follows the general trends of the other two developing countries, with an average compliance level of between and 2 (non-compliant to partially compliant). The average result is distorted by the fact that there was no available data on the website for the 9 recommendations targeting terrorism financing, at the time the mutual evaluation report was published in 2009.

A first observation that can be made is that, in general, the best performers were the European states. The developing countries, on all three other continents, still have problems in implementing some of the important recommendations. Most of the developing countries score 4 (full compliance) only for a very small number of recommendations. On the other hand, the developed countries (France, Hungary) are fully compliant with a much larger number of recommendations, showing both political will to implement these and technical capacity to do so.

Most of the countries have started to implement some of the 9 recommendations to combat terrorist financing and some have obtained scores of largely compliant, which is encouraging. However, the pattern is that for several recommendations for which a score of largely compliant was obtained, there are several others for which a score of 1 (non-compliant) has been scored. This shows that the countries still struggle with the implementation, even if they recognize the importance of such instruments to combat terrorism financing.

Another overall conclusion following a general analysis of the existing scores is that all countries scored 4 for recommendation 19 (Other forms of reporting). This recommendation is part of the measures to be taken by financial institutions and non-financial businesses and professions to prevent money laundering and terrorist financing. The compliance score that all five countries obtained could be related to the fact that the more difficult measures to implement (reporting of suspicious transactions or customer due diligence and record-keeping).

- *Real GDP*. France is obviously the country with the highest GDP and, in fact, it was one of the criteria for which it was selected (so as to be able to determine FATF compliance for one of the biggest economies of the world). France has, however, felt the impact of the global financial crisis and its GDP in 2012, the last year included in the analysis, was still not at the level of the 2008 GDP, the last year before the crisis.

Hungary is in a similar situation, which tends to support the idea that this is a general situation for most of the European countries. In the case of Hungary, the economic crisis of 2008-2009 had a particular negative impact on the country and the population, which had a significant political effect as well: the Hungarian population elected Prime Minister Viktor Orban on two separate mandates, giving him consistent majority each time. All these are interesting implications.

For Argentina, a similar phenomenon occurred, with the notable observation that here, the economic problems were likely more systemic, starting with their own monetary and economic crisis at the beginning of the years 2000s. The type of systemic problems that Argentine has faced could potentially also translate into the lower level of implementation for FATF recommendations.

Real GDP appears as one of the indicators that had the best relationship with the level of implementation of FATF recommendations, so one could potentially expect that this would be reflected in the qualitative analysis as well. One potential problem in the qualitative analysis is that there was only one available mutual evaluation for each country and it would have been more interesting to see how the level of compliance with FATF recommendations fluctuates according to the evolution of the GDP.

Nevertheless, the pattern is quite interesting. The country with the highest GDP, France, scores second in the average level of implementation of FATF recommendations. Hungary scores best, despite the fact that its GDP is

actually the third in the list of countries, quite close to the GDP of Vietnam, which is 4th. Between these countries, an interesting comparison is in order: despite the fact that these are similar GDPs, the level of compliance in the case of Hungary is almost twice as much as the level of compliance in Vietnam.

For Ghana, the rate of GDP growth is a fast one, which could potentially mean that the level of compliance could accelerate in the future as well. From the five countries, Ghana seems to have pulled back well from the crisis and has continued its economic growth. However, the absolute value of the Real GDP is not very high, which could also explain the strong growth rates.

It is also surprising that Argentina scored at such a low level. A higher GDP is, among other things, an indication of the level of economic activity in a country. One could assume that the higher the volume of economic activity, the higher the challenges that the authorities face and, in this context, the more interest to tackle these in a concerted, appropriate manner.

A high GDP such as that of Argentina is indicative of commercial activity, including funds moving to and from international bank accounts and similar activities. The fact that, despite an economy three times as large, the level of FATF compliance is similar to that of Vietnam should be worrying for the authorities in Buenos Aires.

Overall, it is difficult to determine from this analysis whether the Real GDP does have a high impact on the level of compliance. The analysis seems to validate that of the statistical model, with the observation that a more consistent

analysis should probably look at data over a longer period of time, including thus several mutual evaluations and their results of country compliance.

- *Control of Corruption*

The Control of Corruption indicator has been judged in the statistical model as one of the two indicators that plays the most important role in terms of its impact on the level of implementation of the FATF recommendations. The qualitative analysis takes a closer look at what levels of control of corruption, as shown by the indicator, are in each of the five countries that are part of this analysis.

As a working hypothesis, one could expect that in countries with a low level of control of corruption, the level of implementation of FATF recommendations is also lower. One could cite, as arguments in this sense, the fact that the governmental institutions, both at central and local level, do not function properly and that bribes are given and taken in order to facilitate money laundering and/or terrorism financing.

The absolute value of this indicator is quite interesting. First of all, Ghana, the country that has some of the lowest compliance rates (under 2, partially compliant), has the highest control of corruption scores. Its overall average is around 1.20 (on a scale from -2.5 to 2.5, with 2.5 being the highest) and it scores consistently over 1.15 in all the years for which there is information (2009-2012). It is the only country of the group of five that has a positive control of corruption indicator.

The biggest surprise comes from France, which has an average control of corruption index, over the period 2002-2012, was -0.75, the lowest of all the four countries. Its scores were consistently below 0, through the entire period. Yet the effect this had on the level of implementation of FATF recommendations was not significant: as previously discussed, France scored 2.8, the second highest of the countries analyzed here.

An interesting case is that of Hungary and Argentina. The two countries have an average control of corruption indicator of around -0.45, showing an average control of corruption. The difference in the level of implementation of FATF recommendations is, however, significant, with an almost double better score for Hungary.

The results of the statistical analysis for the control of corruption indicator are not fully validated by the qualitative analysis. However, this does not necessarily mean that they are not true. As previously discussed, including in the methodology section, the sample countries for the qualitative analysis were selected to be as representative as possible in terms of size, economic situation, geographical location, type of political leadership etc. However, it may be the case that for this indicator, they are not fully representative. We also need to remember that, for the control of corruption, the statistical analysis in chapter 4 generally showed statistically non-significant data.

At the same time, it could mean that a country like Ghana, where the institutional construction of a democratic society is still on-going, the focus of the

authorities are primarily, at this moment in their history, on fighting and controlling corruption rather than on implementing the FATF recommendations.

Although this is not the purpose of this paper, one could also consider the fact that corruption is different in France, as compared to, for example, Vietnam. In the case of this latter country, the political elite ruling the country is more likely to not control corruption than in a democratic country like France, which will see a regular and continuous change in the country's leadership, as well as a stronger institutional control over the various agencies and leadership factors.

- *Rule of Law*

Again, the rule of law is highest in the case of Ghana, but the likely explanation for a high rule of law indicator and a low level of FATF compliance could be the fact that rule of law is more of a process that follows the implementation of FATF recommendations, namely ensuring that the individuals are prosecuted according to the existing legislation, that the proper proceedings are followed etc. Nevertheless, the differences between the four remaining countries (Ghana stands out as the best performer) are not significant, which would tend to show that the importance of this indicator in differentiating between the countries is not that big.

- *Terrorism*

The Global Terrorism Index was not available for Ghana, but data from 2002 to 2011 were collected for all the other countries. France leads by far, with

Argentina, the second best, having a score that is 4 times smaller. The terrorist threat in France is obviously more significant than all the other countries that have been selected for the analysis. As previously discussed, France's FATF compliance score is second, which tends to point a very weak relationship between the Global Terrorism Index and the level of implementation of FATF recommendations. An additional argument is also the fact that the Global Terrorism Index for Hungary is, on average, only 0.284.

Comparative analysis of the selected 15 FATF recommendations

This subsection of the qualitative analysis examines how each of how each of the four countries performed in the implementation of each of the 15 FATF recommendations that have been selected as the recommendations most likely to relate to the indicators that reflect the socioeconomic conditions in each of the states.

Looking at the results of compliance, the first conclusion that can be drawn is that the European, developed countries consistently outperform the developing countries when it comes to the six recommendations targeting money laundering. While Argentina, Vietnam and Ghana mostly score 1 or, at most, 2, showing non-compliance or partial compliance with the selected recommendations, France and Hungary are generally largely compliant or, in the case of Hungary and the recommendation on MLA on confiscation and freezing, 4 or fully compliant.

When it comes to the nine special recommendations targeting terrorism financing, the results are much more diverse. Hungary scores very high on most of these recommendations, which tends to show that the government in Budapest has focused strongly on combating terrorism financing and on implementing the necessary special recommendations. Unlike any of the other countries, Hungary scores 4-full compliance, for the special recommendation referring to alternative remittance and the one referring to wire transfers. This cannot necessarily be associated with Hungary being a member of the European Union, since France has lower scores for each of these special recommendations.

Another surprising pattern is exhibited by the fact that some of the countries that do not perform so well (Argentina or Vietnam) have high scores for some of the special recommendations, particularly if one looks to their scores comparing these to those of France or Hungary. For example, for the special recommendation referring to wire transfers, Argentina scores 3 (largely compliant) to France's 1 (non-compliant).

Linking this qualitative analysis for each of the 15 FATF recommendations that have been included for the study to the statistical analysis, we need to look first at the conclusions in the statistical analysis chapter for these recommendations. Some of the results are interesting. For example, when it comes to the special recommendations regarding wire transfers, the statistical results were judged as not significant, given the z-scores. This appears

consistent with the qualitative analysis, since here the results are also mixed (thus not significant): Vietnam, a country with very low economic freedom, has also a very low level of compliance with this special recommendations, while Argentina, a country with a similarly low level of economic freedom, has, in fact, a very high level of compliance. This would tend to support the idea that, indeed, the results are not statistically significant.

Another surprising result is given by the country results of the implementation of SR.VIII. In this case, Vietnam scores 3, just as high as France, while Hungary and Argentina score 1, despite the fact that these are established democracies. The most plausible explanation for this could be the fact that on one hand, Vietnam is a Communist country, with a limited presence of NGO in the country. However, on the other hand, Vietnam is keen to implement the necessary measures so as to limit the activity of the NGOs, including my implementing the FATF recommendation in this field. It still remains a debate why Hungary scores just 1, given the active civil society in the country.

For SR.IX-Cash couriers, the qualitative analysis confirms the results of the statistical analysis, whereby the countries with the highest GDP (Argentina, France and Vietnam) score 3 in terms of the level of implementation of this special recommendation. Likely, this is because countries with higher GDPs also have a larger number of commercial flows that justify the use of physical cross-border transportation of currency and negotiable instruments, due to increased

commercial and economic activity. As a consequence, these governments have probably intensified the implementation of SR.IX.

The same conclusion is valid for SR.I, where Argentina and France, the countries with the largest GDPs, also score the highest (3-largely compliant) in terms of the level of implementation of this recommendation. The discussion here could benefit from another element, namely the fact that a country like Argentina, are countries that give greater relevance to the UN system as a framework that ensures an overall coordination of global events in a manner that is not advantageous only for developed countries and for global powers. Implementing SR.I could be the political response of countries like Argentina.

Looking at the scores of 4-full compliance for the nine special recommendations, these are, on each occasion, Hungary's. While the statistical results for the regression for special recommendation referring to wire transfers did not show statistical significance, the one for alternative remittance showed a direct relationship between the index of economic freedom and the level of implementation of SR.VI. This is confirmed by the score that Hungary has obtained. Hungary has the highest index of economic freedom and this is also explained by the number of Hungarians that work on the European markets and that send money back to their families. This process of sending money to families at home was likely an incentive for the Hungarian authorities to implement stricter measures when it came to implementing measures aimed at ensuring the licensing of agents and entities that provide the service of money transfer.

This analysis of the level of implementation of some of the special recommendations from a country-wise perspective may be indicative that there are other indicators that could be considered in future studies. While confirming, in general, the statistical conclusions, both in terms of correlation and in terms of statistical significance, the results of the qualitative analysis tend to show that there could be other factors to be considered.

Conclusions

A first general overview of the level of implementation of FATF recommendations for the five countries shows a clear differentiation between the developed economies, members of the European Union (France and Hungary) and the developing economies (Argentina, Vietnam and Ghana). In the case of the former group, the average level of compliance is between 2.8 and 3.1, so it is ranging around largely compliant. For the latter group, the level of compliance is between 1 and 2, so between non-compliant and partially compliant.

A separate examination for each country shows that the developed economies have the highest number of recommendations for which there is a full compliance score. In the case of the developing economies, this is usually very seldom and, quite often, it is in the case of recommendations for which all the countries score 4 (such as R.19). The developing economies in this sample are still struggling to implement most of the recommendations, which confirms the fact that this is a complicated, long-term process.

There are several arguments to be discussed here as well. First, the FATF is an on-going process that has developed as a concept only in the recent years and has been improved with the addition of the 9 new recommendations tackling terrorism financing. The FATF framework is complex and overarching, covering many areas of the economy and of commercial and financial flows. Countries have difficulties in implementing these recommendations not necessarily because there is no political will, but also because this is not an immediate process. This is more evident for the new recommendations that target terrorism financing. Although this is probably recognized as a necessity for many governments, the countries under analysis here, even the developed economies such as France and Hungary, obtained low scores, which show that the compliance process is still incipient (many scores actually reflected a case of non-compliance), with authorities figuring out what the necessary measures are and how to implement these most efficiently.

The second point to be made is that the European countries are the best performers also because they belong to a political and economic structure, the European Union, which sets rules. These rules need to be accepted and implemented by all the member states as a condition of these countries belonging to this group. This likely explains some of the scores Hungary and France obtained for some of the recommendations, particularly for those related to legislative or judicial aspects.

The results of the qualitative analysis of the sample of countries when it comes to the GDP are mixed. The country with the highest Real GDP, France, performs well, but it is not the best performer, which is Hungary. However, Hungary does not have a high GDP, it ranks 3rd in the list, close to that of Vietnam, which is 4th. Hungary, however, has the highest compliance level. Argentina, with the 2nd Real GDP from the sample, has a compliance level between 1 and 2.

This mixed set of results when it comes to the relationship between Real GDP and compliance rates has several explanations. First of all, countries with larger economies, such as France, have greater challenges and, as a consequence, (1) greater incentives to implement FATF recommendations and (2) greater difficulties in the implementation process. These two elements (incentives vs. difficulties) usually balance each other and determine how high the compliance rate is. In the case of France, the incentives are greater and there is greater commitment to surmount the difficulties. In the case of Argentina, the government does not have the political will and commitment to surpass these difficulties.

One also needs to consider that the mutual evaluations of these countries are usually undertaken during or immediately after the economic and financial crisis of 2008-2009. Faced with significant decreases in the GDP and with growing economic problems, it is probable that many of these countries

shifted their focus to immediate, pressing problems, leaving the implementation of FATF recommendations for a later time.

The control of corruption indicator did not have conclusive results following the qualitative analysis. The country with the highest level of control of corruption, Ghana, also had the lowest level of compliance with FATF recommendations. France, a country with a good score, has the lowest level of control of corruption. All the other countries are somewhere in-between these limits.

The fact that there is no conclusive result of the analysis in this case could lead to the idea that the complexities of a country and the different levels of political and economic development play an important role in the attention that the respective government decides to give to the implementation of FATF recommendation. For a country like Ghana, which scores high for all World Bank governance, the priority in this phase of the country's development appears to be good governance, including control of corruption.

For a country like France, in a different phase of economic and political development, the control of corruption seems to be less of a priority, likely because this is not considered a potential endemic problem, like it would be in Ghana. The authorities can now focus on implementing FATF recommendations as a way of countering more complicated and dangerous threats, like terrorism or money laundering.

The qualitative analysis of the impact of the control of corruption indicator on the level of implementation of FATF recommendations also shows the limitations of this study. Corruption (and, as a consequence, the approach to control of corruption) is a complicated concept. Corruption in Vietnam is different than corruption in France because the local particularities influence the phenomenon. It takes different forms and is active in many ways, which is why it is very different to draw a direct comparison and stipulate that a country with a high control of corruption automatically has a good compliance. The case in point here is eloquent to prove the point.

Some of the results of the qualitative analysis were surprising; so, other than the statistical significance explanation, additional explanations could be offered. One is that compliance with FATF recommendations is, in general, the result of the agreement of all political powers in a country. A commitment across the board of this type will mean that political changes (particularly changes in government) will play no role in the way that a country implements FATF recommendations and it respects its obligations under the FATF framework.

A second explanation is that the implementation is often something that goes down to the technical levels, after the initial political support is given. Some of the indicators that have been used here will likely play no role in affecting the mechanism of technicalities that implements the recommendations. Most of them are indicators reflecting the general situation in a country. For future studies, it

would be useful to identify indicators that go into more detail to reflect these technical aspects.

The second surprising result is related to the global terrorism indicator. Certainly, France has a high index score, and it scores reasonably high in terms of the level of implementation. However, all the other countries have low terrorism index scores and Hungary, for example, scores the highest in terms of compliance levels. This could either show no relationship or, just as plausible, the fact that the selection of the countries is not relevant from the perspective of the relationship between the global terrorism index and the level of FATF compliance.

A future development of the study could provide a selection of countries with similar levels of terrorism activity (high) that could be used to compare the level of compliance for these particular countries. This could, for example, include France and determine how France ranks in terms of compliance, as compared to terrorism activity, in a group of other similar countries.

For future studies, it would be useful to expand the sample of countries used for the qualitative analysis. Although they were selected to be as representative as possible, there were still many indicators for which the results of the qualitative analysis proved rather contradictory or lacked a clear pattern of relationships. At the same time, as it has been previously suggested, it may be the case to consider, and use in a new statistical and qualitative analysis, new

indicators that could have a more important role in the level of compliance, including country-wise.

When looking at the 15 recommendations that have been selected for further study, it is interesting that a country such as Vietnam, with a rule of law indicator similar to that of France, has such low scores in the implementation of many of these 15 recommendations, scoring 1-no compliance for most of them. This translates into the qualitative study the fact that the rule of law indicator is, in fact, statistically not significant for the level of compliance with most of these recommendations, as predicted in the statistical analysis chapter.

The role of this chapter was, in fact, to validate the conclusion of the previous chapter and this is, in fact, the case. While the expectations would have been, for example, for the global terrorism to play a role in the level of compliance, this is not the case, thus confirming the results from chapter 4, which showed little statistical significance for this indicator, both related to the average level of FATF implementation and to the 15 recommendations. A similar case for the Rule of Law indicator is validated by the results that have been obtained through this qualitative analysis. In a similar manner, countries with a higher index of economic freedom, such as France or Hungary, score better in the implementation of the 15 FATF recommendations under analysis here, since an open economy implies economic, investment and commercial flows, which need to be monitored, from a FATF perspective.

VII. Conclusions

This paper originally set out to determine particular indicators of the socioeconomic, governance and terrorism situation in a country that play a role in implementing the FATF recommendations. This chapter presents some of the conclusions.. The first part offers a summary of the main conclusions, followed by two parts that briefly present the conclusions of the statistical analysis, as well as the conclusions of the qualitative analysis. Subsequently, the five hypotheses that this paper set out to validate are discussed, with a focus on understanding which of the hypotheses were proven true by the statistical analysis and the qualitative analysis. The chapter concludes with overall conclusions and with proposals for areas that can be expanded in further studies.

As previously mentioned, the paper's main objective was to draw conclusions regarding independent variables that play a role in the implementation of FATF recommendations. The overall assumption was that some countries perform better than others when it comes to FATF compliance and, as a consequence, that there are internal factors that determine this compliance differentiation. The focus of the study was on the internal factors that drive FATF compliance. As previously discussed in the chapter regarding the literature review, other studies have successfully focused on some of the external factors that improve the level of implementation of FATF recommendations and such external factors were left out in this study.

The paper had in mind socioeconomic, governance and terrorism activity as the primary factors that could potentially impact the level of compliance. These factors were not understood as being exhaustive, but were believed to potentially be able to best impact the implementation process. A country such as France, with a high level of terrorist activity, was thought to have a higher incentive to implement the necessary measures to combat this trend, including recommendations to counter terrorism financing.

One can point out that the list of indicators reflecting the different areas previously mentioned is not an exhaustive one. In fact, the factors that were believed to play a role in FATF compliance are not exhaustive either. These were selected based on the five hypotheses as factors we believed could successfully reflect and prove or disprove these hypotheses. The indicators were also selected based on their relevance. We chose the governance indicators that the World Bank provides, for example, because we believed in the World Bank's institutional reputation and on its capacity to generate and to provide useful data and information. The Index of Economic Freedom was also selected as a composite index that covered a large and diverse set of areas, including the business environment, the commercial activity of a country and the economic interrelations between the respective country and the rest of the world. Despite these arguments, we cannot claim, however, that these are the necessarily the best indicators or that including additional ones would not have changed the analysis, particularly the statistical analysis.

At the same time, the study sought to identify further details to identify whether or not there are particular indicators that impact 15 selected FATF recommendations. The selection included the nine special recommendations that target terrorism financing, but also several of the recommendations that target money laundering. The idea was to understand whether the conclusions remain consistent and whether some of the independent variables play a greater role in the implementation of particular recommendations.

We have selected these 5 recommendations with the argument that they best matched the hypotheses and the selected indicators. For example, we believed that a recommendation that referred to the ratification and implementation of international convention against money laundering would be suitable to reflect the hypotheses regarding the rule of law, as well as the respective World Bank indicator. As previously, in the case of the domains and the indicators, this selection is not exhaustive and future studies could diversify this choice to include other recommendations. Since the focus of this study was primarily on terrorism and terrorist activity and the way FATF recommendations help combat terrorism, all nine special recommendations that focus on terrorism financing were included in the study.

Conclusions of the statistical analysis

For the regression analysis that was performed for all five independent variable and the level of FATF compliance as the dependent variable, the z-test revealed statistically significant result for two of these variables: Real GDP and

the index of economic freedom. In both cases, the correlation coefficients were positive and showed direct relationships between the two independent variables and the level of compliance with FATF recommendations. In both cases, the correlation coefficient was small, showing that the relationship was not too strong, but enough to point out that as the index of economic freedom and the GDP would improve, so would the level of compliance.

For the other three independent variables, there was no statistical significance, so there were no further discussions on the correlation coefficients. These results were mostly confirmed for the regression analyses that would take into consideration each variable separately, although there were a few recommendations for which the results for the global terrorism index or the control of corruption were statistically significant. These will be addressed separately in the paper.

For the 15 selected FATF recommendations, the index of economic freedom performed best when it came to statistical significance, and had positive correlation coefficients for these statistically significant results. This was not the case for the governance indicators, which showed significance for few recommendations or the global terrorism index.

One of the few recommendations for which statistical significance was identified was the recommendation regarding law enforcement authorities. For this recommendation, there was also a positive correlation coefficient, leading to the idea that when control of corruption is stronger, the law enforcement and

prosecution authorities in money laundering or terrorist financing investigations are more effective in their actions. We concluded that this was a logical fact, because, in general, a higher control of corruption tends to lead to a better functioning of law enforcement institutions.

The control of corruption indicator also yielded statistically significant results when it came to the ratification and implementation of international convention. This recommendation was selected among the 15 recommendations because the initial belief was that it linked to the hypotheses regarding the rule of law (countries with a better rule of law also do a better job in ratifying and implementing international conventions). However, the statistical analysis proved that the results were not statistically significant for the rule of law indicator, but were significant, with a positive correlation coefficient, to the control of corruption indicator. It is difficult to explain this, but it is likely related to the fact that a higher control of corruption also applies to the institutional entities that pass legislation (Parliaments, Commissions etc.) and that are thus more likely to be more efficient in their work.

The global terrorism index yielded statistical significant results for two of the nine special recommendations: international cooperation and freezing and confiscating terrorist assets. In both cases, the correlation coefficient was positive and ranging from 0.199 to 0.24, reflecting a direct relationship between the level of terrorism activity and the level of FATF compliance with these two recommendations. This result is in no way surprising: the expectations were that

this type of result would be applicable to most if not all of the nine special recommendations, which were selected on purpose, so as to analyze the impact of the terrorism activity on compliance with these. The underlying assumption was that countries with higher terrorist activity have a greater incentive to comply with recommendations that particularly target confiscating terrorist assets and similar recommendations.

Conclusions of qualitative analysis

Somewhat surprisingly, Hungary appeared as the best performer of the selected group of 5 countries. This was interesting, because Hungary was neither the largest country, nor the one with the highest GDP. In fact, Hungary is not the best performer in any of the five independent variables, except for the index of economic freedom. This is important, because this was one of the two independent variables that was shown to be statistically significant in relation with the FATF compliance.

The qualitative analysis showed large differences in FATF compliance between the two European countries (France and Hungary) and the other three countries (Vietnam, Argentina and Ghana). While the first two scored average FATF compliance scores of around 3 (largely compliant), the three developing countries scored, across the board, compliance scores between 1 and 2 (non-compliant to partially compliant) on average.

This situation was also reflected in the case of the nine special recommendations targeting terrorism financing, with the separate mention that

the implementation process appears more complicated in this case even for some of the developed European economies. France, for example, had several scores of 1 (no compliance) for some of the special recommendations. The likely reason for this is that these recommendations were added to the FATF 40 at a later time and countries are still working to understand how the implementation process should operate and how these recommendations need to be put into practice.

Overall, the countries with the highest index of economic freedom (France and Hungary) scored the highest scores for the average level of implementation of FATF recommendations, as well as for most of the 15 recommendations that had been selected for further analysis. This appears to validate the results of the statistical analysis. On the other hand, for the Real GDP, the results were mixed. France, with the highest GDP, scored second in the average level of compliance, after Hungary. At the same time, large economies such as Argentina, scored a low compliance score. It appears that the impact of Real GDP on the implementation of FATF recommendation is not fully confirmed by the qualitative analysis.

This is probably because larger economies have, on one hand, a greater incentive to implement FATF recommendations, in order to ensure the control over money laundering or terrorism financing, which have a greater probability of occurring in a large economies, with lots of economic, commercial or investing flows. On the other hand, in the case of larger economies, the recommendations

are more difficult to implement across the board and this is a more complicated process.

Hypotheses validation

Conclusions regarding the validity of the hypotheses were drawn both by looking at the overall implementation of the FATF recommendations (recognized as the FATF compliance average) and the implementation of the 15 particular recommendations that have been selected. For the average level of implementation of FATF recommendations, the z-statistic shows statistical significance for the index of economic freedom and for the Real GDP. In both cases, there is a positive coefficient correlation, showing a direct relationship between both indicators and the level of compliance. The relationship is not very strong, but it exists.

As such, hypotheses no.2 and no. 3 are validated. A more open economy and a better economic situation in the country result in a better implementation of FATF recommendations. Overall, this conclusion is also validated by the qualitative analysis. France, the country with the highest GDP and the most developed economy is the best performer of the five countries. Hungary, a country with an open economy, has a high level of compliance as well.

The fact that there is no statistical significance for the indicators that have been selected for hypothesis 1 (rule of law), hypothesis 4 (control of corruption) and hypothesis 5 (global terrorism index) tends to show that these are

not the right indicators to statistically validate the respective hypotheses. To do a better job linking these indicators to validate the hypotheses would mean expanding the range for the values of these independent variables beyond the existing ones. For the purpose of these studies, the results are not statistically significant to support the idea of a relationship between them.

The qualitative analysis also validates this conclusion, given the results that the five countries have obtained. The fact that the results are not statistically significant is confirmed by these particular country results. For example, Vietnam has a reasonably high rule of law score (-0.45, on as scale from -2.5 to 2.5) and a similar control of corruption average over the period under analysis (-0.64, on a similar scale). However, it scores an average FATF compliance score lower than 2 and 1 (no compliance) or 2 (partial compliance) for most of the 15 recommendations that have been selected for further study.

The lack of statistical significance is further validated for the global terrorism index and it is useful here to look at two of the countries, France and Hungary. While France has a higher global terrorism index than Hungary, its average compliance rating is lower than Hungary's. The results thus do not validate the hypothesis according to which a country with more terrorist activity is more compliant with FATF recommendation. This is a reflection of the fact that the regression results are not statistically significant.

On the other hand, validation of the hypotheses is more diverse when it comes to the 15 FATF recommendations that were taken into consideration for a

more in-depth analysis. The country with the highest global terrorism index (France) has the highest level of compliance with the nine special recommendations that target terrorist financing. The country with the lowest global terrorism index (Vietnam) has the lowest compliance scores for these nine special recommendations.

One should note, however, that the global terrorism index does not yield statistically significant results for any of the 15 FATF recommendations. This means that the results of the qualitative analysis are not sufficient to validate the hypothesis that countries with a higher terrorist activity have a higher level of implementation of the nine special recommendations targeting terrorism financing.

The qualitative analysis validates the statistical analysis and the hypothesis that a more open economy has a positive impact on the level of implementation of these 15 recommendations. Countries like France and Hungary, with a higher economic index, score better for these 15 FATF recommendations than the other three countries. Of course, this is not necessarily across the board and there are recommendations that yield ambiguous results, particularly when it comes to the performance that Argentina has obtained in the implementation of some of the special recommendations (it many cases, it performs as high as France or, for some of the recommendations, better).

Overall conclusions and proposals for future studies

This study sought to analyze the relationship, if any, between several indicators reflecting the socioeconomic situation in a country and the level of implementation of FATF recommendations. Five indicators were selected, because it was believed these indicators gave a wider reflection and representation of a state's condition: index of economic freedom, global terrorism index, real GDP and two governance indicators (control of corruption and rule of law).

For each of these indicators, five hypotheses were advanced. In general, these hypotheses proposed that a country with greater economic freedom, higher GDP, better control of corruption and rule of law and a higher global terrorism index would also have a higher level of implementation of FATF recommendations. In each case, there was a logical motivation for these assumptions.

In the case of the economic freedom and the Real GDP, the assumption was that a country with more economic activity had greater economic, financial and investment flows and a greater incentive of improving the level of implementation of FATF recommendations. These recommendations target money laundering and terrorist financing. The hypotheses are particularly relevant for a selected set of 15 FATF recommendations, 9 of which target terrorist financing.

As such, a logical assumption is that countries with greater economic activity have a greater incentive to implement internationally recognized measures that combat these activities. The FATF recommendations are clearly a way of action in this direction, so there are expectations that states with more developed and more open economies will better implement these recommendations.

In the case of the governance indicators, the assumption is that a country that has a better implementation of the rule of law (implementation of well-defined laws, regulation and legislation) will also do a better job in implementing FATF recommendations. The same assumption would be similar in the case of the control of corruption indicator: a country that combats corruption internally will have more efficient implementation entities in different fields, including when it comes to FATF recommendations.

For the global terrorism index, the assumption was that the higher the terrorist activity in a country, the higher the level of compliance with FATF recommendations. This hypotheses was logically explained through the fact that a country with higher terrorist activity would have a government that is more interest and has more incentives to implement the FATF recommendations and, thus, to combat terrorist activity.

The conclusions following the statistical analysis and the qualitative analysis are:

1) *The index of economic freedom and the Real GDP have a direct impact on the implementation of FATF recommendations.*

This conclusion was largely confirmed by the statistical analysis and validated by the qualitative analysis. First of all, the results of the regression analysis for the average level of FATF compliance and all the five independent variables have shown statistical relevance for the index of economic freedom and for the Real GDP. In both cases, the correlation coefficient was also positive, emphasizing that there is a direct relationship between both indicators and the level of FATF compliance. The conclusion is thus that the economic freedom of a country, the Real GDP and the level of compliance with FATF recommendations tend to move together.

This conclusion for the average level of FATF compliance was validated by the qualitative analysis. The countries with a higher level of economic freedom also had a greater level of compliance, something that is also valid for the Real GDP. One could go further, however, and show that the results of the qualitative analysis also validate the fact that the relationship between the Real GDP and the level of compliance is not that strong: a country like Argentina, despite a reasonably high GDP, has a low level of compliance.

The index of economic freedom and, to a lesser degree, the Real GDP, are also factors that drive the implementation of the 15 FATF recommendations that have been further considered for study. For most of the 15 FATF recommendations, as previously discussed, the index of economic freedom

yields statistically significant results in the regression analysis and has a positive correlation coefficient, indicating a direct relationship with the implementation of these 15 recommendations. For the Real GDP, there are fewer instances of results that are statistically significant, but, as compared to the other three indicators, there are still many more.

These conclusions regarding the 15 FATF recommendations are partially validated by the qualitative analysis and the validation problems appear particularly in the nine special recommendations. France, for example, a country with a high index of economic freedom, comparative to the other countries, has scored mixed results for the nine special recommendations targeting terrorism financing.

One of the explanations that this study has proposed is that the nine special recommendations have been proposed much more recently by the FATF and, as one of the consequences, countries, national governments and local authorities are still working to understand the how the implementation process should work more efficiently. This is an on-going process, which could explain some of the mixed results for the qualitative analysis, but also the lack of statistical significance in the regression analyses.

2) *The governance indicators and the global terrorism index do not have a statistically significant relationship with the level of implementation of FATF recommendations.*

The results of the regression analysis for the average level of implementation of FATF recommendations and the five indicators that are used as the independent variables showed that these were not statistically significant. One cannot say, in this case, whether the governance indicators and the global terrorism index play a role or not in the compliance levels, and the sample would need to be extended for further conclusions. For these conclusions, the statement will only point to the lack of statistical significance rather than to whether the indicators have an impact or not on the compliance levels. This is confirmed by mixed results in the case of the five countries included in the qualitative analysis.

This is confirmed by the regression results in the case of these three indicators, which are generally not statistically significant for the 15 FATF recommendations. Furthermore, the qualitative analysis has shown mixed results for these indicators when looking at the different 15 FATF recommendations. Countries with higher rule of law indicators, like Vietnam, for example, have scored low scores when it came to these 15 recommendations.

One should reiterate the fact that these three indicators are not statistically significant under the current conditions. Under different statistical conditions, including expanding the number of values that is used for these indicators could yield other conclusions. Changing the confidence level to 1 % could also generate different results., including in terms of changing the statistical significance.

3) *The statistical significance or non-significance from the regression analysis is confirmed by the qualitative analysis*.

Beyond the two previous conclusions, this is probably the most important for the study. Indeed, many of the results in the qualitative analysis appear to be surprising. We have previously mentioned, for example, the fact that France, a country with a high level of terrorist activity, does not have a high level of compliance with the nine recommendations targeting terrorism financing. At the same time, a country with a reasonable score for the rule of law indicator has an overall low average compliance score.

These apparently abnormal conclusions in fact validate the conclusions of the regression analysis, according to which these indicators do not have statistically significant results for the 15 recommendations or, in the case of the global terrorism index and the governance indicators, for the average level of implementation of all 49 FATF recommendations. At the same time, the more coherent results that have been obtained for the other two indicators favor the opinion from chapter 4 that these have statistical significance.

The same relationship between the lack of statistical significance for the respective indicators, confirmed by the ambiguous results of the qualitative analysis for the same indicators, is the instrument by which the hypotheses 1, 4 and 5 are rejected. Despite the logic of assuming that there is a connection between the control of corruption and the implementation of FATF

recommendations, the statistical analysis and the qualitative analysis do not confirm this.

This can definitely represent a beginning for future analyses and papers on this topic. While the paper has identified economic indicators that have positive correlation coefficients and are statistically significant in relation to the level of FATF compliance, something that the qualitative analysis has confirmed, this is not the case for governance indicators or for the global terrorism index. One cannot draw the conclusions that these fields are not related to the implementation of FATF recommendations and should take into consideration the idea that the indicators can be better selected to reflect these fields.

At the same time, future studies should also consider a larger and more diverse portfolio of countries. On one hand, the criteria that were used in this case for the selection included the geographical, political or economic situation in these countries. These could be replaced in future studies by criteria that could better reflect technical aspects that could relate better to the implementation process.

From this point of view, comparative analyses of countries in the same economic group or at the same level of economic development could also be interesting. For example, a legitimate research question would be how the level of compliance varies for the countries in the European Union. Such a comparative study could, for example, identify differences between the countries

in the West (more economically developed) and the countries in the East (less economically developed and that have joined the EU at a later time).

There is an underlying, though unproven idea implicit in this study that the implementation of FATF recommendations is not necessarily a politically or economically driven process, once the authorities have pledged the initial political commitment. Further studies could concentrate on identifying some indicators that would reflect the technical levels of FATF compliance.

On the other hand, one can notice that, even if the countries are indeed diverse, some of them scored almost the same score for the index of economic freedom. Despite the fact that this is one of the indicators that was well reflected in the analysis, one should consider for future analyses a selection that takes into account more extreme values for the countries. Thus, the type of indicators that are used for the selection of countries for the qualitative analysis could be different.

Furthermore, it is also interesting to point out that this study took into consideration exclusively internal factors. The independent variables, namely the indicators that have been selected, are all indicators that describe the internal situation in a country, whether from a socioeconomic perspective, governance or terrorism activity-related. None of these indicators refer to external factors that could play a role in the implementation of FATF recommendation. This area was central to Katarina Lula’s work, whereby she analyzed the impact of outside pressures on FATF compliance.

Here, my interest was focused on internal factors that played a role. Obviously, further area of study could look at other external factors that play a role in FATF compliance. One could note that some of the internal indicators that were used in this study are not sufficient to explain why a country complies, for example, with a recommendation like special recommendation I (SR.I), which refers specifically to the country's compliance with instruments from the UN framework. In order to analyze the incentive that countries have to implement this special recommendation, other external factors need to be considered.

This example is not singular. With few exceptions, the countries are part of a global network and they interact, in various ways and in different areas. It is likely that the level of implementation of FATF recommendations is also influenced by interaction, either at a regional or global scale or within different organizations. Cooperation in these institutional frameworks could definitely result in a better level of compliance.

Certainly, this is only an assumption and the main challenge for this kind of study, just as in the case of this paper, is to identify the indicators that reflect the interaction between countries. One could potentially look at the activity of countries in international organizations, at the level of engagement and other similar factors in order to understand how these impact the level of compliance with FATF recommendations.

Clearly, internal factors such as good governance or control of corruption are not statistically significant in the implementation of recommendations such as

SR.I, as the statistical analysis showed, confirmed by the qualitative analysis. Other factors would need to be considered in future studies that can better reflect things like country participation in international organizations.

We have noticed that governance indicators, including the Rule of Law, are not factors that play an impact on the compliance with FATF recommendations. However, countries such as Hungary and France, which are members of the European Union, were the best performers in the qualitative analysis. A legitimate question is whether belonging to an organization with strict rules such as the European Union, which actually has a legislative *acquis* that all members need to implement and abide by, improves the level of compliance with FATF recommendations. For future studies, it could be interesting to analyze if and how the level of compliance with FATF recommendations varies within the European Union, for all the 28 member states that respect the same regulations. One could also analyze whether there are money laundering and terrorism financing regulations at the EU level.

Policy recommendations

Based on the results of this study, which has shown statistical significant results and a direct relationship between the index of economic freedom and Real GDP, on one hand, and the level of implementation of FATF recommendations, policy recommendations can include adopting measures that will increase the level of economic freedom in the country.

As previously discussed in the paper, the index of economic freedom is a complex index that takes into consideration and compounds several elements, including a country's trade, business environment, investment etc. As such, policy to improve the index of economic freedom in a country could, in fact, take into consideration all of these different areas that the index reflects and that it takes into consideration in the overall aggregation. Policy to liberalize trade more and to open the business environment to foreign companies could also play a positive role in a better implementation of FATF recommendations.

This type of policy could also target something that was previously discussed and that could be taken into consideration for future studies. More interaction between countries, including from an economic, commercial or political perspective, could improve FATF compliance. A logical explanation for this could be that a higher economic freedom index implies a greater interconnection between countries and, as such, a mutual incentive to better implement the FATF recommendations.

References

Alkaabi, A et al. (2012). “Money Laundering and FATF Compliance by the International Community”. Information Security Institute, Australia

AML ABC. (2012). “Revised FATF Recommendations – Rethinking the way to conduct AML/CFT Risk Assessment”, July, at http://www.amlabc.com/aml-category/aml-case-studies/revised-fatf-recommendations-rethinking-the-way-to-conduct-amlcft-risk-assessment/

Andorno, R, (2007). “The Invaluable Role of Soft Law in the Development of Universal Norms in Bioethics”. On the Internet at http://www.unesco.de/1507.html

Balaceanu, Ion; Porojoan, Eugen, (2012). Methods, Instruments and Sources of Money Laundering Used for Financing International Terrorism. Center for Analysis and Security Studies Association.

Beekarry, Navin, (2011). “The International Anti-Money Laundering and Combating the Financing of Terrorism Regulatory Strategy: A Critical Analysis of Compliance Determinants in International Law”. Northwestern Journal of International Law & Business. 31:137.

Blazejewski, (2008) The FATF And Its Institutional Partners: Improving the Effectiveness And Accountability of TransGovernmental Networks, 22 Temp. Int’l & Comp. L.J. 59.

Buro, Karen. N.A. *Correlation and Regression Analysis*. Course lecture – Stat

141.

Dalyan, Sener, (2008). *Combating the Financing of Terrorism: Rethinking Strategies for Success*. Defence Against Terrorism Review. Vol. 1, No. 1, Spring 2008, 137-153

FATF (2014). *Asia/Pacific Group on Money Laundering (APG*), http://www.fatf-gafi.org/pages/asiapacificgrouponmoneylaunderingapg.html

FATF IX Special Recommendations. 2001. On the Internet at http://www.fatf-gafi.org/media/fatf/documents/reports/FATF%20Standards%20-%20IX%20Special%20Recommendations%20and%20IN%20rc.pdf. Last retrieved on August 12, 2014

Gardner, K. (2007) in Global Governance at Risk" ed. David Held and Charles Roger. Cambridge: Polity Press, 2013.

Global Witness (2012) "How FATF can measure and promote an effective anti-money laundering system", June, at http://www.globalwitness.org/sites/default/files/library/How%20FATF%20can%20measure%20and%20promote%20an%20effective%20anti-money%20laundering%20system.pdf

Global Terrorism Index. On the Internet at http://economicsandpeace.org/research/iep-indices-data/global-terrorism-index

Guzman, A; Meyer, T, (2010). "International Soft Law". *The Journal of Legal Analysis, Vol. 2, No. 1, Spring 2011*

Hale, T. (2011) in "Global Governance at Risk" ed. David Held and Charles Roger. Cambridge: polity Press, 2013.

Hayes, Ben (2012) "Counter-terrorism, 'policy laundering' and the FATF: legalising surveillance, regulating civil society", *Transnational Institute/ Statewatch*, at http://www.statewatch.org/analyses/no-171-fafp-report.pdf

Hoffman, Bruce, (1998). *Inside Terrorism*. Columbia University Press

Hoffman, Bruce, (2006). *Inside terrorism*, 2 ed., Columbia University Press

http://data.worldbank.org/about/country-classifications/country-and-lending-groups

Index of Economic Freedom. The Heritage Foundation. On the Internet at http://www.heritage.org/index/about

International Convention for the Suppression of the Financing of Terrorism. (1999). On the Internet at http://www.un.org/law/cod/finterr.htm. Last retrieved on August 12, 2014

International Monetary Fund. (2014) "Panama: Detailed Assessment Report—FATF Recommendations for Anti-Money Laundering and Combating the

Financing of Terrorism". *IMF Country Report 14/54.* At http://www.imf.org/external/pubs/ft/scr/2014/cr1454.pdf

James K. Jackson, (2012) "The Financial Action Task Force: An Overview" *Congressional Research Service*, fas.org/sgp/crs/misc/RS21904.pdf

Johnson, (2008) "Third round FATF mutual evaluations indicate declining compliance", Journal of Money Laundering Control, Vol. 11 Iss: 1, pp.47 – 66.

Jong-a-Pin, Richard. 2006. *On the Measurement of Political Instability and its Impact on Economic Growth*. Faculty of Economics. University of Groningen. On the Internet at http://congress.utu.fi/epcs2006/docs/D8_jong-a-pin.pdf. Last retrieved on May 25, 2013.

Kaplan, Eben, (2006). *Tracking Down Terrorist Financing*. Council on Foreign Relations.

Kersten, Armand, (2002). *Financing of Terrorism — A Predicate Offence to Money Laundering?* Financing Terrorism, 49-56

Kumar, L; Cambell, J, (2009). "Global Governance: The Case of Money Laundering and Terrorist Financing". Forum on Public Policy. On the Internet at http://forumonpublicpolicy.com/spring09papers/archivespr09/kumar.pdf

Langbein L.; Knack, S. (2010). *The Worldwide Governance Indicators: Six, One, or None?* The Journal of Development Studies, vol. 46(2), pages 350-370

Lula, Karolina, (2014). *Terrorized into Compliance: why Countries Submit to Financial Counterterrorism*. Dissertation

Masciandaro, Donato, (2005). "False and Reluctant Friends? National Money Laundering Regulation, International Compliance and Non-Cooperative Countries". European Journal of Law and Economics, Volume 20, Issue 1, pp 17-30

MENAFATF. (2005). *First Annual Report 2004-5.* At http://www.menafatf.org/images/UploadFiles/FirstAnnualReport04-05.pdf

Menard, S (2002). *Applied Logistic Regression Analysis.* Volume 106; Google eBook.

N.A. (2014). *What is money laundering?* Duhaime's Anti-money Laundering Law in Canada. On the Internet at http://www.antimoneylaunderinglaw.com/aml-law-in-canada/what-is-money-laundering. Last retrieved on August 11, 2014

N.A.. 2009. *Aux Baricades*. The Economist

N.A. 2009. *Human Development Report 2009*. UNDP. On the Internet at http://hdr.undp.org/en/media/HDR_2009_EN_Complete.pdf. Last retrieved on May 20, 2013

N.A. 2012. *Kendall's Tau*. Statistical-Research.com On the Internet at http://statistical-research.com/wp-content/uploads/2012/09/kendall-tau1.pdf. Last retrieved on January
16, 2015

N.A. (2011). "Laundering the Proceeds of Corruption". FATF Report. On the Internet at http://www.fatf-gafi.org/media/fatf/documents/reports/Laundering%20the%20Proceeds%20of%20Corruption.pdf

(N.A.). *Mutual Evaluations*. APG. On the Internet at http://www.apgml.org/mutual-evaluations/page.aspx?p=a901712a-54e4-4b3b-a146-046aefca6534. Last retrieved on August 12, 2014

N.A. 2011. *2010 Provisional Results Out.* On the Internet at http://web.archive.org/web/20110615141322/http://www.ghana.gov.gh/index.php?option=com_content&view=article&id=4712:2010-provisional-census-results-out&catid=88:daily-news-summary&Itemid=236. Last retrieved on May 26, 2013

N.A. *Regression and correlation analysis*. From Encyclopedia Britannica. On the Internet at http://abyss.uoregon.edu/~js/glossary/correlation.html. Last retrieved on January 29, 2014

N.A. (2013). "Summary Record of the Second Plenary of FATF-XXIV". OECD Conference, Paris

N.A. (2013). "The Use of the FATF Recommendations to Combat Corruption". FATF. On the Internet at http://www.fatf-gafi.org/media/fatf/documents/recommendations/BPP-Use-of-FATF-Recs-Corruption.pdf.

N.A. (2014). *What is money laundering?* Duhaime's Anti-money Laundering Law in Canada. On the Internet at http://www.antimoneylaunderinglaw.com/aml-law-in-canada/what-is-money-laundering. Last retrieved on August 11, 2014

Nelsen, R.B. 2001, *Kendall tau metric*, in Hazewinkel, Michiel, *Encyclopedia of Mathematics*, Springer

Pieth, M, (2002). *Financing Terrorism*. Kluwer Academic Publishers

Pollinger, Zachary, (N.A.). *Counterfeit Goods and Their Potential Financing of International Terrorism*. The Michigan Journal of Business

Quaye, Robert; Coombs, Hugh, (2011). "The Implementation of Anti-Money Laundering, Terrorist Finance and Corruption Laws in Ghana". International Journal of Governmental Financial Management
.
Stuart Yikona, et. al. (2011) "Ill-gotten Money and the Economy: Experiences from Malawi and Namibia" *World Bank,* at http://elibrary.worldbank.org/doi/book/10.1596/978-0-8213-8887-7

Sykes, Alan. 1992. *An Introduction to Regression Analysis.* Course Lecture. On the Internet at http://www.law.uchicago.edu/files/files/20.Sykes_.Regression_0.pdf. Last retrieved on May 25, 2013

Thomas, M. (2009). *What Do the Worldwide Governance Indicators Measure?* European Journal of Development Research

Thomson Reuters Acellus. (2014) *FATF Recommendations revised*, at http://world-check.thomsonreuters.com/content/fatf_new_recommendations_july_2012?elq=29296c323d7849319177b4c629e736da

Transnational NPO Working Group on FATF (2014) "Recommendations: Financial Action Task Force Typology Review", http://www.charityandsecurity.org/system/files/NPO%20Sector%20Typology%20Position%20Paper%20FATF.pdf

Weisstein, Eric W. "Covariance." From *Math World*--A Wolfram Web Resource. http://mathworld.wolfram.com/Covariance.html. Last retrieved on May 30, 2014.

Winer, Jonathan, (2002). *Globalization, Terrorist Finance, and Global Conflict: Time for a White List?* Financing Terrorism, 5-40

World Governance Indicators. The World Bank. On the Internet at http://info.worldbank.org/governance/wgi/index.aspx#home

Yepes, Conception Verdugo, (2011). “Compliance with the AML/CFT International Standard: Lessons from a Cross-Country Analysis”. International Monetary Fund.

Appendices

		Economic Freedom	Real GDP	Rule of law	Control of corruption	Global Terrorism
Average of levels of implementation of FATF recommendations	Coeff.	0.0215581				
	t-statistic	5.3				
	Coeff.		9.39E-14			
	t-statistic		3.56E+00			
	Coeff.			0.1577139		
	t-statistic			3.97		
	Coeff.				0.1641915	
	t-statistic				4.18	
	Coeff.					-0.0112908
	t-statistic					-0.49
	Coeff.	0.0913933	2.75E-13	-0.6349869	0.8452981	0.0567634
	t-statistic	3.81	2.72	-1.07	1.47	0.66

	FATFAVeRAGE		Customerduediligence		Politicallyexposedpersons		DNFBPR131521	
	Coef.	z	Coef.	z	Coef.	z	Coef.	z
IndexofeconomicfreedomAverag	0.0913933	3.81	0.0658394	2.51	-0.000803	-0.03	0.0835182	2.72
RealGDPAverage	2.75E-13	2.72	5.72E-14	0.53	1.35E-13	1.2	-4.50E-14	-0.33
RuleoflawAverage	-0.6349869	-1.07	-0.654912	-0.97	0.4299017	0.63	-1.276179	-1.62
ControlofCorruptionAverage	0.8452981	1.47	0.5479488	0.83	-0.168067	-0.26	1.201544	1.59
GlobalTerrorismIndexAverage	0.0567634	0.66	0.0361812	0.38	0.0051797	0.05	-0.080061	-0.66

	Criminalisingthefinancingo		Freezingandconfiscatingter		Reportingsuspicioustransaction		Internationalcooperation	
	Coef.	z	Coef.	z	Coef.	z	Coef.	z
IndexofeconomicfreedomAverag	0.0592128	2.28	0.1021753	3.34	0.0976342	3.33	0.0960472	3.19
RealGDPAverage	4.61E-13	2.27	1.72E-13	1.3	6.09E-14	0.53	1.10E-13	0.94
RuleoflawAverage	-0.489131	-0.75	-0.708654	-1.07	-0.744992	-1.1	-0.655727	-1
ControlofCorruptionAverage	0.8318866	1.31	1.293337	1.97	0.8818323	1.34	1.007521	1.54
GlobalTerrorismIndexAverage	0.165991	1.66	0.2402292	2.25	0.03546	0.36	0.1990825	1.95

	Sanctions		Lawenforcementauthorities		MLAonconfiscationandfreez		Ratificationandimplementati	
	Coef.	z	Coef.	z	Coef.	z	Coef.	z
IndexofeconomicfreedomAverag	0.0376498	1.52	0.0954252	3.55	0.0748963	3	0.0767823	2.75
RealGDPAverage	2.19E-13	1.92	2.86E-13	1.66	1.38E-13	1.22	3.51E-13	2.48
RuleoflawAverage	-0.456691	-0.7	-0.865936	-1.33	0.0693732	0.11	-1.321488	-1.92
ControlofCorruptionAverage	0.556902	0.88	1.288911	1.98	0.0830834	0.14	1.597122	2.39
GlobalTerrorismIndexAverage	-0.0123957	-0.13	-0.034112	-0.36	-0.033851	-0.35	0.0272134	0.27

	Alternativeremittance		Wiretransfers		Nonprofitorganisations		Cashcouriers	
	Coef.	z	Coef.	z	Coef.	z	Coef.	z
IndexofeconomicfreedomAverag	0.0676356	2.65	0.0302293	1.22	0.0570762	2.21	0.0009126	0.04
RealGDPAverage	1.82E-13	1.68	9.83E-14	1.03	3.63E-13	2.15	6.31E-13	2.69
RuleoflawAverage	-0.3287414	-0.5	-0.367527	-0.57	0.5632129	0.88	0.5568949	0.88
ControlofCorruptionAverage	0.2133968	0.33	0.4776868	0.74	-0.150174	-0.24	-0.08556	-0.14
GlobalTerrorismIndexAverage	0.0678118	0.69	0.0131271	0.14	0.0365407	0.37	-0.136697	-1.3

Mean estimation Number of obs = 131

	Mean	Std. Err.	[95% Conf.	Interval]
GlobalTerrorismIndexAverage	1.968382	.178168	1.615898	2.320866
IndexofeconomicfreedomAverag	58.75726	.8172911	57.14034	60.37417
ControlofCorruptionAverage	-.11445	.0861713	-.2849295	.0560296
RuleoflawAverage	-.1097798	.0862736	-.2804619	.0609022
RealGDPAverage	4.77e+11	1.36e+11	2.08e+11	7.46e+11

Global Terrorism Index Average

	Percentiles	Smallest		
1%	.016	.014		
5%	.031	.016		
10%	.092	.024	Obs	138
25%	.403	.025	Sum of Wgt.	138
50%	1.2205		Mean	2.09692
		Largest	Std. Dev.	2.165005
75%	3.444	7.548		
90%	5.444	7.666	Variance	4.687245
95%	6.536	7.964	Skewness	1.142399
99%	7.964	8.677	Kurtosis	3.257239

Index of economic freedom Average

	Percentiles	Smallest		
1%	29.37273	28.125		
5%	44.43636	29.37273		
10%	47.99091	36.82222	Obs	178
25%	53.05455	36.91667	Sum of Wgt.	178
50%	58.24091		Mean	59.45258
		Largest	Std. Dev.	10.10081
75%	66.03636	81.40909		
90%	71.39091	81.72727	Variance	102.0264
95%	76.84545	87.74545	Skewness	.0589673
99%	87.74545	89.67273	Kurtosis	3.581421

Control of Corruption Average

	Percentiles	Smallest		
1%	-1.52976	-1.712818		
5%	-1.295818	-1.53672		
10%	-1.082549	-1.52976	Obs	211
25%	-.7130609	-1.511563	Sum of Wgt.	211
50%	-.2592903		Mean	-.0088871
		Largest	Std. Dev.	.9673403
75%	.6554282	2.242633		
90%	1.395107	2.359752	Variance	.9357473
95%	1.990835	2.379506	Skewness	.6648466
99%	2.359752	2.453536	Kurtosis	2.676033

Rule of law Average

	Percentiles	Smallest		
1%	-1.739198	-2.376993		
5%	-1.41686	-1.833684		
10%	-1.210325	-1.739198	Obs	213
25%	-.7633153	-1.705149	Sum of Wgt.	213
50%	-.140552		Mean	-.0112754
		Largest	Std. Dev.	.9692097
75%	.7994141	1.894307		
90%	1.321972	1.918554	Variance	.9393674
95%	1.757974	1.929425	Skewness	.2116175
99%	1.918554	1.944955	Kurtosis	2.143055

Real GDP Average

	Percentiles	Smallest		
1%	1.50e+08	3.29e+07		
5%	6.10e+08	1.50e+08		
10%	1.15e+09	1.63e+08	Obs	194
25%	5.74e+09	1.74e+08	Sum of Wgt.	194
50%	2.38e+10		Mean	3.34e+11
		Largest	Std. Dev.	1.29e+12
75%	1.73e+11	3.45e+12		
90%	5.57e+11	5.44e+12	Variance	1.67e+24
95%	1.61e+12	6.20e+12	Skewness	8.486323
99%	6.20e+12	1.50e+13	Kurtosis	89.09797

Variable	Obs	Mean	Std. Dev.	Min	Max
GlobalTerr~e	138	2.09692	2.165005	.014	8.677
Indexofeco~g	178	59.45258	10.10081	28.125	89.67273
ControlofC~e	211	-.0088871	.9673403	-1.712818	2.453536
RuleoflawA~e	213	-.0112754	.9692097	-2.376993	1.944955
RealGDPAve~e	194	3.34e+11	1.29e+12	3.29e+07	1.50e+13

stats	Global~e	Indexo~g	Contro~e	Ruleof~e	RealGD~e
p50	1.2205	58.24091	-.2592903	-.140552	2.38e+10
kurtosis	3.257239	3.581421	2.676033	2.143055	89.09797
skewness	1.142399	.0589673	.6648466	.2116175	8.486323
se(mean)	.1842974	.757088	.0665945	.0664092	9.29e+10
cv	1.032469	.169897	-108.8482	-85.95769	3.869081
variance	4.687245	102.0264	.9357473	.9393674	1.67e+24
sd	2.165005	10.10081	.9673403	.9692097	1.29e+12
range	8.663	61.54773	4.166354	4.321948	1.50e+13