



Role of the Forensic Accountant in Current Global and Domestic Security, Defense Issues, Ethics and Regulations in Canada

Module Code & Title

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Role of the Forensic Accountant in Current Global and Domestic Security, Defense Issues, Ethics and Regulations in Canada.

Chapter 01-Introduction

1.1 Background to the Study

Security and defense is one of the most important aspects of a country, where the governments are bound under a social contract to provide the security for the citizen in terms of their lives property and livelihoods and also to ensure the basic rights of citizens inclusive of Cultural, economic political and religious rights as accepted, ratified or recognized by the international treaties and/or internationally recognized norms.

Thomas Hobbs in Leviathan as expressed and equated the citizen of a country as the worms in a giant called as the leviathan and the said Leviathan is equated to the Government. Accordingly the citizens are highly dependent on the government for the security and defense. The security and defense of the citizens at large can also be termed as “Public Security” and Public at large demand the security to be provided sufficiently by the government and as already stated it is one of the prime duties of the government to provide sufficient security to the public.

Crimes in general are considered to be done against the state or the crown which in other words infer that a crime is committed against the society as a whole and especially the general crimes in the penal code which deals with bodily harm, life, property and other rights of persons are dealt by the police and such like law enforcement agencies and are punished by justice system in order to ensure the security of the country.

However there are special types of threats to the security and the defense of a country and mostly in these circumstances the general provisions of a penal code or the general law enforcement would not be sufficient in consideration of the nature and the degree of the damages that may cause to the society as a whole. "Terrorism" is one such and the major special threat to the defense and security of a country. The "Terrorism" the term itself depicts the impact on the society i.e. terrorizing the society. The term terrorism has been defined by the U.S. Code of Federal Regulations as "the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives" (28 C.F.R. Section 0.85).

In Canada the section 83.01 of the *Criminal Code* has defined terrorism as an act committed "in whole or in part for a political, religious or ideological purpose, objective or cause" with the intention of intimidating the public "...with regard to its security, including its economic security, or compelling a person, a government or a domestic or an international organization to do or to refrain from doing any act."

Use of force or violence to threaten the society is a key element of terrorism, thus the acts which are recognized in terrorism may *inter alia* include criminal acts like inflicting death and bodily harm with the use of violence; endangering a person's life; risks posed to the health and safety of the public; significant property damage; and interference or disruption of essential services, facilities or systems.

The British Terrorism Act (2006), has referred to terrorism as to the use and threat of action "designed to influence the government or to intimidate the public or a section of the public" and "made for the purpose of advancing a political, religious or ideological cause."

The “Terrorism” in the modern days is not limited to one single locality but a well spread network interconnected with governments, para-governmental movements or other terrorist groups which are active in other nations or international terrorist groups. The recent developments of the Information and communication technologies have paved the way to plan, execute acts of terrorism effectively and also to spread and fund the acts of terrorism. The development of e-commerce and m-commerce are effectively used to for financial transactions essential for the terrorism. Further the development of social media is a good and effective tool to spread the ideologies of terrorism to at a large scale.

Therefore a forensic accountant can be regarded as an important role in the prevention of terrorism, especially in regards to the identification of the movement of funds via online transactions and track whether such funds are used for terrorist activities.

Thus the role of the forensic accountant must change In order to conduct a successful investigation an IFA must be able to understand the new development of Information technology and including cloud technology and recent developments in e commerce and m commerce (especially online money transfers and crypto currencies) and how they can be used to threaten the Global and Domestic Security and Defense and in such cases where threats have been identified, the strategy of investigations and how the said investigations to be conducted and how to gather and preserve evidence and testify in litigation. Further this study will give special attention to the knowledge that should be gained, skills to be developed by an IFA in handling investigations concerning the Global security and Defense.

This research topic will mainly deal with how the role of a forensic accountant should be in identifying and prevention of Global terrorism, which has become a Global and a Domestic

Threat. The Global Terrorism With the conducive environment created by the highly developed and ever developing information and communication technology has rapidly spread all over the world. The funds needed for the terrorist groups with the new Information technology can be done with minimal detection even under constant surveillance by various authorities.

This research shall be based on a questionnaire and semi structured interviews of IT specialists, Forensic accountants and Bankers and desk research on peer reviewed Journal Articles & Text Books regarding Information and Communication Technology, Anti Money Laundering, Online Transaction, Prevention of Funding Terrorism via Internet, Development of Know Your Customer and the impacts of virtual wallet systems in global terrorism. This study will identify and analyze the need of knowledge and skill required by the IFA in order to conduct a successful forensic investigation and the present levels of knowledge possessed by the IFA in handling these global and domestic security issues. This will further enable to identify the gaps where special attention will have to be focused and thereby enable for sound recommendations to update the knowledge and the skill needed by an IFA in conducting investigations of this nature.

The terrorism cannot be isolated nowadays as it can be seen as a network that has spread all over the world and where in some nations the funds necessary are gathered and transferred via complex online transfers in order to procure the resources (ammunition, explosives and such other weapons or equipment needed) but the effects can be witnessed at anywhere in the world where they are expected or least expected.

The terrorism can be prevented by constant monitoring of the movement of funds via online Transactions using IT and cloud systems or in a *Fin Tech* environment. Therefore this study

will help in shaping the role of the forensic accountant to suit the modern day needs in Global and Domestic security.

1.2 Theoretical Background

A) Justification of the Study

Security and the Defense of a Country is one of its major concerns especially in a context where the security and defense is in a threat due to the terrorism in its global activity with the use of high end computer and information and communication technology. However the terrorism can be curtailed by tracking the fund transactions mainly cross boarder fund transfers done via electronic means like the usage of e-Commerce and m-commerce or online transactions which *inter alia* includes *Fin Tech* via chain of accounts in the ordinary nature will be very hard or virtually impossible to track down. The role of a modified forensic account who is familiar with the advanced high end information and communication technologies can be the best option for the Track down and prevent the fund transfers that foster the Global Terrorism.

The role of a forensic accountant in the context establishment of National security and Defense mainly through prevention of global terrorism in advanced information and communication technological environment and each unique aspects of each are discussed in this study.

B) Significance of the study

There are many research studies already conducted and published in regard to the role of forensic accountants in many spheres of activity in USA, UK and Canada especially on

the aspects of Duties, Responsibilities, Professional Ethics, Maintenance of the Standard of Due Care and Diligence. However there are very few studies that have addressed the development of skill and knowledge that needs to counter and to prevent global terrorism in order to establish National Security and Defense in the Local sphere and thereby minimize the cross boarder fund transfers to suppress global terrorism.

The studies done on the role of the forensic accountant and the need to develop skills to address the fund transfers through the use of High End novel Information and Communication technology is very rare and there is a lacuna as to this area of study and this study focuses on the said lacuna with the view to fill this gap in research.

C) Research Objectives

1. To identify and analyze the Traditional role of a Forensic Accountant in Canada, USA and UK.
2. To identify and analyze the role of a Forensic Accountant in Canada, USA and UK in the context of Engagements regarding National Security and Defense with especial focus to prevention of Terrorism.
3. To identify and critically analyze the Skill that needs to be acquired and developed by forensic accountants engaged in investigations regarding internal and cross-border fund transfers by terrorist groups through the use of Novel Information and Communication technology.

4. To formulate and synthesize a model as to how the forensic accountants engaged in investigations regarding internal and cross-border fund transfers by terrorist groups through the use of Novel Information and Communication technology can be effectively trained.

D) Research Problem

The main issue that suffices with the existing forensic accountants is that they possess skill, expertise and knowledge as to the conventional and traditional engagements mainly in the sphere of commercial financial investigations or loss quantifications but are not exposed to special engagements such as National Security, defense or prevention of terrorism in the midst of the modern well developed information and communication technology.

The main feature of this is that in that there is a gap in the skill that is possessed by a forensic account as opposed to the skill ought to have by a forensic accountant specialized in security, defense and prevention of terrorism and the identification and of the said gaps in skill, knowledge and expertise of the same is essential to shape the role of a general forensic accountant to be a specialist in the said sphere.

E) Research Questions

1. Is the skill, knowledge and expertise possessed by a traditional, conventional forensic accountant inadequate to address the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology?

2. What are the areas of skill, knowledge and expertise needed to be improved in order to address the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology?
3. Does the present system of training and curriculum for forensic accounting students adequately deal with the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology?
4. Will it be viable and suitable to modify the curriculum and training programme which has incorporated subjects to address the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology?

F) Hypotheses

1. Skills, knowledge and expertise possessed by traditional, conventional forensic accountants are inadequate to address the issues of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology.
2. The skill, knowledge and expertise in relation to online and cloud transactions including e-commerce and m-commerce, of forensic accountants needs to be improved in order to address the needs of National Security, Defense and

prevention of terrorism in the context of modern well developed Information and Communication Technology.

3. The present system of training and curriculum for forensic accounting students does not adequately deal with the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology.

G) Limitations

1. Time – The time allocation is highly insufficient to present a full scale research.
2. Availability of Resources – The availability of books, journals is yet another limitation for the research.
3. Wide Scope of Study Required – Pervious researches have not covered this area of study thus there is a wide gap and this research intends to fill only a part of the said lacuna.
4. Lack of previous research – Lack of previous research on this area has somewhat broadened the scope of this study resulting in lowering the depth of the study.

Chapter 2 - Literature Review

2.1 Definitions

a. Terrorism – There are many definitions given to terrorism by many authors but since this study only focuses the USA and Canadian Jurisdictions the definitions used in Canadian and US jurisdictions. The definitions in the introduction chapter and the discussion chapter are taken from the following sources,

1. U.S. Code of Federal Regulations 28 C.F.R. Section 0.85 – This is the definition given by the United States for Terrorism, which is discussed in the chapter 01 and chapter 04 of this study.

2. Criminal Code of Canada, section 83.01- This is the definition given by the Canadian Jurisdiction for Terrorism, which is discussed in the chapter 01 and chapter 04 of this study.

3. *The British Terrorism Act (2006)* – This has also given a similar definition for terrorism.

4. EU Counter-Terrorism Strategy. 2005- The definition is discussed in the chapter 4 of this study.

5. FBI.2019 - The definition is discussed in the chapter 4 of this study.

Types of Terrorism

(Mohun R. 2012) has dealt with the classification of types of terrorism and it has been discussed in the chapter 04, and the main types discussed therein are, Conventional terrorism, economic terrorism, cyber terrorism, narcotic terrorism, nuclear terrorism and eco terrorism.

Dorgul M, Aslan A and Celic E. 2011 in their work has elaborated in Cyber terrorism and the same is discussed in the chapter 4 of this study.

c. Fin Tec

“Financial technology” or “FinTech” refers to technology-enabled financial solutions. The term FinTech is not confined to specific sectors (e.g. financing) or business models (e.g. peer-to-peer (P2P) lending), but instead covers the entire scope of services and products traditionally provided by the financial services industry. (Arner, DW; Barberis, JN; Buckley, RP.2015)

Hussain,F.2015 has defined Financial Technology as “the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions and markets. It includes institutional, product and process innovation.”

Kim, Y., Park, Y. J., & Choi, J.2016 has defined Fin Tech as an enhancement of mobile centered IT technology in the service sector which is used to enhance the efficiency of financing systems. McAuley, D.2015 has defined it as the economic industry that consists of various companies that use the new information and communication technology in order to make more efficient financial systems.

Chunhajinda, 2017 has dealt with 6 objectives of *FinTech* and they are as follows,

1. Enhancing the Infrastructure Efficiency
2. Enhancing Efficiency of High Value Activities by Automated Systems
3. Elimination of Financial Intermediaries:
4. The use of Data Mining: Machine Accessible Data, Artificial Intelligence / Machine Learning and Big Data are innovations, which help analyzing details of the data in terms of both quantity and Quality.

5. Offer and placement of Sue of Products and Services,

6. Customers' Capacity Building,

Further the Fin Tech also includes the use of crypto currencies and crypto currencies is often used for frauds and terrorism, thus crypto currencies have a key role of funding in supporting terrorist operations, counterterrorism finance (CTF) (Schwarz, C. Manheim, D Johnson, P. 2019).

2.2 Concepts

a. Finance and Terrorism

(Stringer. D, 2011) has referred to in his work "Terrorist financing" as the raising, storing, movement of funds whether it be acquired by illicit or licit methods if the said funds are used for the purposes of committing terrorist acts or maintaining the structure of a terrorist organization.

(Williams N.2012) dealing with the complexity of the financing Terrorists and further states that the it is difficult to prevent the terrorism financing as the terrorists tend to act innovatively and evade law and surveillance, thus the officials who track terrorism financing must find countermeasures to deny, destroy, detain, and disrupt these networks. According to him the situation can be more complex as the development in information and communication technologies have paved the way for instantaneous cross boarder financing.

Williams N.2012 has stated that the task of preventing the financing for terrorism becomes more complex and difficult in poorly governed territories and the same can result in strengthening terrorist organizations in the global context.

The globalization has made the combat of financing for terrorism more difficult as the illicit acts of terrorist groups have made connections with other groups and make and transfer. (Weintraub S.2002).

Most of the terrorist groups combine proceeds from licit sources with illicit sources and that makes it more challenging to detect and trace the sources and destinations of the movement of funds (Louise I. Shelley and John T. Picarelli, 2002)

Colin P. Clarke 2018 deals with the usage of financing and he has stated that said funds are generally used to augment militant groups', plan and execute terrorist attacks.

(Colin P. Clarke,2018) has emphasized that without the illicit funds the terrorist groups have rarely function as unlike the states they cannot impose legitimate taxed on the citizens or obtain revenue like such. However he has referred to some of the terrorist organizations who act like states and find their revenue and has considered he Liberation Tigers of Tamil Eelam in Sri Lanka and the Taliban in Afghanistan as examples.

ISIS in Iraq and Syria, also mimic the actions of a nation state and find a large portion of their share of revenue therefrom. It is mainly done by taxes and tariffs imposed on the subjects.

The danger of undermining the financial by banks and other financial institution can lead to flourish of the global terrorism and the funding cannot be prevented as the lapses of the banks will enable the terrorist groups to easily place, transfer and appropriate funds being unnoticed (Jones S, 2015)

b. Terrorism and the role of Forensic Accountant

Owojori,A & T.O. Asaolu, T, 2009 have emphasized on the importance of the role of the forensic accountants in the process of investigation of gathering of funds, placement, movement and appropriating funds for purposes of terrorism and other frauds.

Fursova, J 2018, has also discussed the process of prevention, identification and tracking of fund gathering and movement and appropriation of funds for terrorism and further has gone on to discuss, how a forensic accountant handle such in the environment of Fin Tech and rapidly developed Information and Communication technology. The importance of the use of use of artificial intelligence and other software has also been discussed therein.

Gaither M 2018, in his article, “The Role of Forensic Accounting in U.S. Counterterrorism Efforts”, has emphasized the need of the forensic accountant to take charge in the investigations regarding financing for terrorist purposes and has also discussed in detail the measures to be taken.

Curry, M.2013 in his article “Forensic accounting and terrorism” has dealt with the importance and also explained how such investigations are to be conducted especially in a globalized *FinTech* and highly developed Information and communication era where there is more liberty to commit crimes including financing the terrorism.

Bilbeisi ,K. 2015, in his work of “How Forensic Accounting Is Used to Combat Terrorism in the United States” has also dealt as to how the forensic accountant must act in combat of terrorism.

2.3 Scope of Existing Research

The work of the above mentioned researches like, Owojori,A & T.O. Asaolu, T, 2009, Fursova, J 2018, Gaither M 2018mCurry, M.2013 and Bilbeisi ,K. 2015 above referred to have all researched on the role of the forensic accountants in combatting terrorism and how it

is done in a fin tech environment but the said researches have not dealt with the comparison and critical analysis of the skill, knowledge and the expertise possessed by a conventional forensic accountant as opposed to the skill, knowledge and the expertise ought to be possessed by a forensic accountant in the combat of the global terrorism in a Fin Tech environment and to identify what are the said skills, knowledge and the expertise needed to be developed by such a forensic accountant.

2.4 Significance

Therefore by analysis of the literature discussed above the significance of this study is that, this study deals with the aspects of the skills, knowledge and expertise that needed to be developed by a forensic accountant who is engaged in the combatting of terrorism in the environment of a well-developed information and communication technology and Fin Tech. Further this study also has presented the developments that could be done to the curriculum and the training of the forensic accountant.

Chapter 3 - Research Methodology

This chapter outlines the methodology which was adopted for this study in order to complete and answer the research question and to prove or disprove the hypothesis. Further this chapter elaborates how this study was conducted. This chapter also describes the research approach, sampling, obtaining primary data, review of secondary data and the surveys done in the form of a questionnaire and a semi structured interview.

3.1 Research Approach

This study is a combination of mostly a qualitative desk research where research will be done on review of literature on The topic and related topics, however this research also includes collection of primary data and a quantitative and qualitative review of the said empirical data.

(Holme & Solvang. 1997) has discussed two different methodological approaches in regard to conducting a research,

1. Quantitative Method – Which deals with collection and analysis of numerical data (digits and numbers) and the said the numerical data is statistically analyzed in order to arrive at a conclusion.
2. Qualitative Method – Which is focused on the perception of the researcher and interpretation of concepts and principles and also synthesis of concepts and theories, however such is not dependent on numerical or statistical interpretation or analysis, thus a qualitative research can be conducted as a desk research.

In this research the main approach is the qualitative approach probing in to the aspects of Terrorism, Financing, Fin Tech, Artificial Intelligence, Role of a forensic Accountant (traditionally, modern and ought to be in view of terrorism).

The quantitative data in this research is limited to obtaining and analysis of the level of awareness of the concepts of Terrorism, Financing, Fin Tech, Artificial Intelligence, Role of a forensic Accountant (traditionally, modern and ought to be in view of terrorism).

3.2 Primary Data & Quantitative Analysis

In order to gather primary data needed for the said quantitative analysis a semi structured interview was conducted where the awareness levels of various professionals and government officers were interviewed on as pre planned questions and also included some open ended question allowing to express their ideas and views on the said topics.

The said semi structured interviews were also used for the qualitative analysis of the answers given to the open ended questions contained in the said semi structured interviews.

The other method which was used to obtain quantitative data is the questionnaire given to students in the discipline of forensic accountancy in selected universities and colleges, 20 of such students were selected and were given with the questionnaire. The said questionnaire contains multiple choice questions, where the candidate has to select the most appropriate answer accordingly during the analysis the students will be graded as per marks scored to the questions of each part and categorized accordingly and the results will be analyzed based on simple descriptive analysis.

3.3 Sampling and Data Collection

The sample chosen for the semi structured interviews is as follows,

1. Leading Professional Forensic Accountants – 2 interviews
2. Military Official in the field of prevention of Terrorism – 2 Interviews
3. Banking Officials – 2 Interviews

4. Telecommunication & Internet service providers – 2 Interviews
5. Leading IT specialists – 2 Interviews
6. Judges – 2 interviews

The selection of the sample was not random but the consideration was the easy access of the said professionals and government officers, since the time given for this research is very limited the researcher has to gather data within a limited time duration, so in order to enable the same the closest (in terms of geographic proximity and convenience of access was considered) professionals or Governmental Officers were selected.

Only 20 candidates were selected for the questionnaire due to the time constraints, based on my personal knowledge (as to students of Forensic accounting) in this institute and other institutes.

3.4 Analysis of Quantitative Data

The quantitative data is analyzed by using simple descriptive analytical methods and the results were presented by the use of simple tables and pie charts as there is only a limited need for the quantitative data.

3.5 Desk Research

Major part of this research is conducted in the form of a desk research thus much importance was given to the review and analysis of existing literature on the main topic and the related topics.

The review of literature coupled with the information gathered from semi structured interviews paved the way to present a terrorism Model, terrorism tree and a Financing for terrorism model which is presented in the chapter 4 (Results, Discussion and Analysis).

Further the review of literature was used to formulate the research questions and the hypothesis (already discussed under the introduction chapter) and also the existing gaps in the present literature available and avenues for further research.

The qualitative analysis of literature in detail was done in the results, discussion and analysis (Chapter 04) of this study.

Chapter 04 - Results, Discussion and Analysis

4.1 Analysis of Primary Data

4.1 (a) Descriptive Analysis of Data Asserted by the Semi Structured Interviews

The primary data were obtained by semi structured interviews conducted with Government officials, Professionals and also by the questionnaire posted to students engaged in the study of forensic accounting.

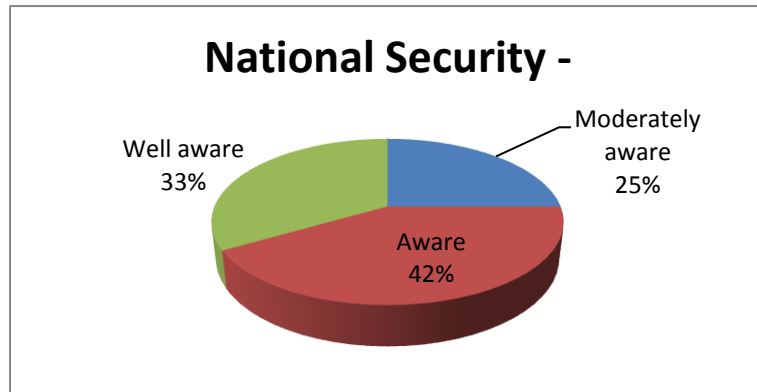
The semi Structured Interviews were carried out from 2 individuals from the following professions and public officers,

7. Leading Professional Forensic Accountants – 2 interviews
8. Military Official in the field of prevention of Terrorism – 2 Interviews
9. Banking Officials – 2 Interviews
10. Telecommunication & Internet service providers – 2 Interviews
11. Leading IT specialists – 2 Interviews
12. Judges – 2 interview

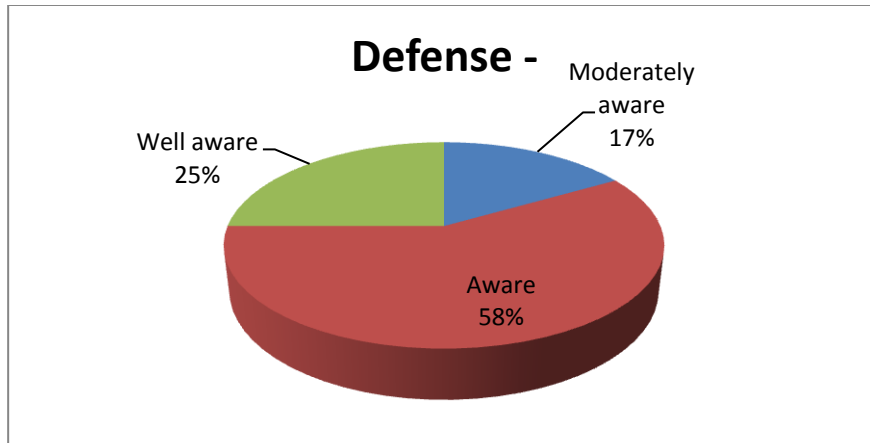
The Part 03 of the semi structured interviews deal with the assertion of the knowledge of the General background to the subject of National Security, Defense and the basics of Terrorism, the answers given by the public officers and professionals whom were interviewed, were evaluated based on the available literature on the same and categorized as follows,

| Area | Sample Size | Level of Awareness | | | |
|--------------------------------|-------------|--------------------|------------------|-------|------------|
| | | Not Aware | Moderately aware | Aware | Well aware |
| National Security | 12 | - | 3 | 5 | 4 |
| Defense | | - | 2 | 7 | 3 |
| Global Terrorism | | - | 3 | 7 | 2 |
| Prevention of Global Terrorism | | - | 3 | 6 | 3 |

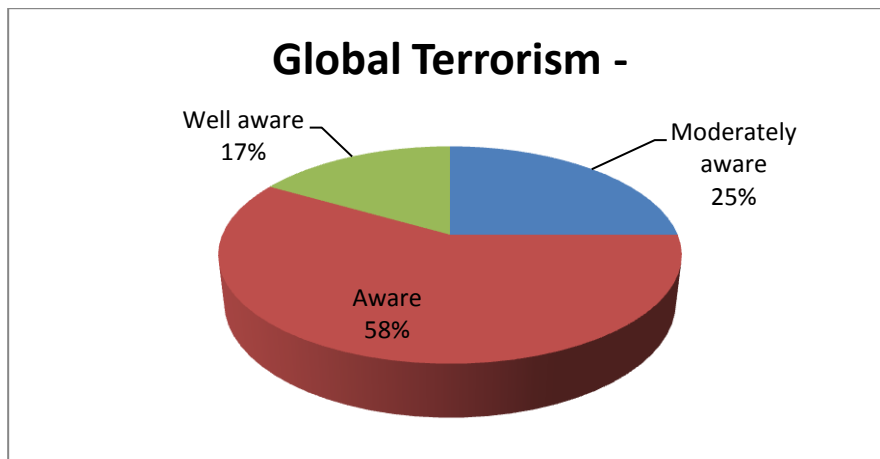
Accordingly the awareness on the National Security can be presented as follows,



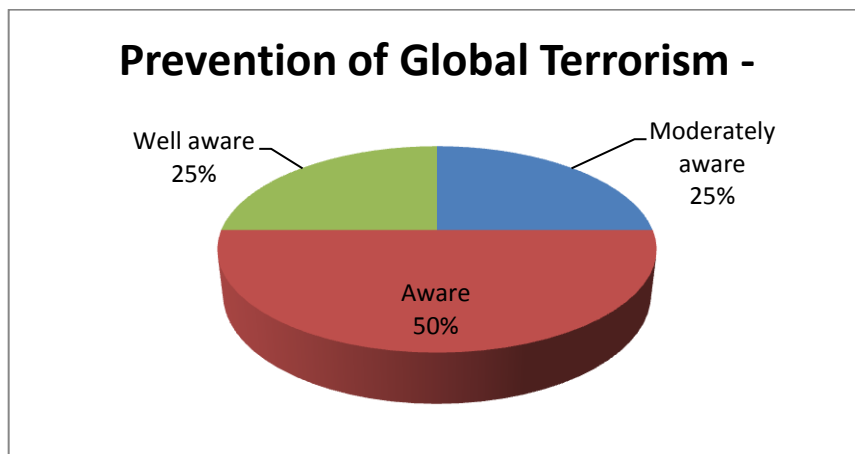
Accordingly the awareness on the Defense can be presented as follows,



Accordingly the awareness on the Global Terrorism can be presented as follows,



Accordingly the awareness on the Global Terrorism can be presented as follows,



The awareness levels of the sample is not similar in regard to the aspects in the part 3 of the semi structured interview and the same can be analyzed as follows based on the profession of the sample,

| Area | Sample Size | Level of Awareness | | | | | | | |
|-------------------|-------------|--------------------|--------------------|------------------|--|-------|---|------------|--|
| | | Not Aware | Profession /Office | Moderately aware | Profession/Office | Aware | Profession /Office | Well aware | Profession /Office |
| National Security | 12 | - | | 3 | Banking Officer -2 IT specialist-1 | 5 | Forensic Accountants -2 IT specialist -1 Judge -1 Internet Service Provider -1 | 4 | Military Officers -2 IT specialist -1 Judge -1 |
| Defense | | - | | 2 | Banking Officer -2 | 7 | Forensic Accountants -2 IT specialist -1 Judge -2 Internet Service Provider -2 | 3 | Military Officers -2 IT specialist -1 |
| Global Terrorism | | - | | 3 | Banking Officer -2 IT specialist -1 | 7 | Forensic Accountants -2 IT specialist -1 | 2 | Military Officers -2 |

| | | | | | | | | | |
|--------------------------------------|--|---|--|---|--|---|---|---|---|
| | | | | | | | Judge -2 Internet Service Provider - 2 | | |
| Prevention of Global Terrorism | | - | | 3 | Banking Officer -2 IT specialist -1 | 6 | Forensic Accountants -2 IT specialist - 1 Judge -1 Internet Service Provider - 2 | 3 | Military Officers - 2 Judge -1 |

It is therefore manifestly clear from the above table that the awareness on the said topic vary according to the profession and certain professions like the banking officers of the selected sample were only moderately aware of the said topics as opposed to the military officers were well aware of the same.

The part 4, of the said semi structured interview dealt with the challenges in prevention of terrorism in the modern context of well- developed Information and communication technology in a *Fin Tech* environment. In analysis of the answers given by the selected sample it was again manifestly clear that the Military Officers were well aware in comparison to the other professionals and the forensic accountants were aware though not well aware of the same.

| Area | Sample Size | Level of Awareness | | | |
|--|-------------|--------------------|--|--|---|
| | | Not Aware | Moderately aware | Aware | Well aware |
| Challenges in prevention of terrorism in the modern context of well- developed Information and communication technology in a Fintech environment | 12 | - | 03 Banking Officers-2 IT Specialist-1 | 05 Forensic Accountants-2 Internet Service Providers-2 Judge -1 | 04 Military Officer -2 IT specialist-1 Judge -1 |

In the analysis of the answers given to the part 5 i.e. “General Idea about the role of a traditional forensic accountant in prevention of terrorism” of the said semi structured interview it was clear other than the forensic accountants and the Judges the role of a forensic accountants was not very familiar, thus during the interviews the interviewees were briefed on the duties and responsibilities of a forensic accountant and also provided some basic literature of the role and function of a forensic investigator. Accordingly the analysis of the answers revealed especially from the Judges and the Forensic Accountants that the level of the role of the forensic accountant is minimal in the sphere of prevention of terrorism other than the forensic accountants engaged in firms specialized in the fields of prevention of terrorism. The emphasis was given by the Forensic Accountants that no adequate knowledge, skill and experience to meet the growing demand to prevent the terrorism.

In the analysis of the part 6, 7 and 8 of the said semi structured interview reveals that the professionals like, IT specialists and Internet Service Providers although had no general awareness as to the role of a Forensic Accountant had suggested that the forensic accountants in order to successfully deal with the financial movement and to prevent the same which is the back bone of terrorism, need to improve their knowledge in *Fin Tech* and artificial intelligence as well as new software which can be used to trace suspicious transactions.

The Military officers in their answers have stressed out the need of preventing the vicious cycle of terrorism which inter alias includes Propagation of Ideologies, Finding Target Audience, Brain washing, Cell Formation, Column Formation, Planning Terrorist Activities, Execution Terrorist Activities and Publicity of Terrorist Activities, are fully dependent on fund raising and fund transferring and such like financial aspects. It was further stressed out that fund raising activities of the terrorism is largely connected with the illegal activities like,

Human trafficking, Drug trafficking, Money laundering, weapons dealing and also from lawful means such as donations, contributions from the remunerations of employees, contributions from profits of legal businesses through a complex transactions through bank accounts, thus it is hard to trace the sources, the destinations and the routes of such fund transfers.

The Banking officers have stressed out the fact that the existing systems like KYC and AML policies are insufficient to track the movement of funds, thus the intervention of financial intelligence focused around skilled forensic accountants to monitor and trace the movement of funds. The said interviews of the banking officers have further revealed that the special skills in *Fin Tech* and artificial intelligence would be a key requirement for tracking and tracing financial movements of terrorist organizations and also to identify how the funds gathered by lawful means are transmitted to the terrorist groups without notice.

The judges have also highlighted in their answers the need of the forensic accountants to trace the movement of funds and gather *prima facie* evidence to enable the courts to issue the relevant interim orders to freeze the assets of the terrorist groups and also to issue necessary orders to prevent the transfer of funds to terrorist groups as well as to issue further investigation warrants.

4.1 (b) Descriptive Analysis of Data Asserted by the Questionnaire

A sample of 20 students engaged in Forensic Accounting were given with the questionnaire and the duly answered questionnaire was evaluated and based on the answers to specific questions compared with the available literature and the questionnaire was focused on finding the awareness of the students regarding various aspects of terrorism and the knowledge and the skill that a student should get in the course of training as a forensic accountant and the necessary recommendations for changes in the courses.

The first part contains 5 multiple choice questions with 4 answers and it is required that the most appropriate answer must be marked. The 1st part deals with the assertion of basic knowledge as to the awareness of terrorism. The results for the 1st part of the questionnaire is as follows,

| No of Correct Answers | 0 Correct answers | 1 Correct Answer | 2 Correct Answers | 3 Correct Answers | 4 Correct Answers | 5 Correct Answers |
|-----------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| No of Participants | 0 | 3 | 4 | 10 | 2 | 1 |

The part 2 of the said questionnaire consists of 5 multiple choice questions with 4 answers and it is expected that the most appropriate must be marked. The part 2 deals with the basic knowledge as to the fund raising and financial transactions for terrorism in a *Fin Tech* environment. The results obtained by the sample is as follows

| No of Correct Answers | 0 Correct answers | 1 Correct Answer | 2 Correct Answers | 3 Correct Answers | 4 Correct Answers | 5 Correct Answers |
|-----------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| No of Participants | 0 | 1 | 3 | 12 | 2 | 2 |

The part 3 of the questioner has a semi-structured question where the sample students are required to provide short answers as the existing curriculum of the forensic accountant training courses and their adequacy in regard to the identification, tracking and prevention of fund raising and fund transfer for terrorist activities.

The analysis of the answers given to the questions in part 3 has clearly revealed that the existing training courses in forensic accountancy has not adequately deal with the aspect of prevention of terrorism or prevention of global terrorism, funding and fund transfer for both local and global terrorism. Further some of the participants have also stated that the knowledge imparted on *Fin Tech* and artificial intelligence is important not only in

prevention of terrorism but also in other instances such as detection of frauds committed through and by the use of *Fin Tech* and artificial intelligence, detection and prevention of money laundering, where the role of traditional Forensic Accountant would come into play.

The majority have also raised their concerns that the curriculum of the forensic accountants have neglected to probe into the aspects of *Fin Tech* which means Financial Technology, which inter alia includes, e-commerce, m-commerce and the use of artificial intelligence for the same. In other words it can be described as a business that has targeted in providing financial services by making use of software and modern technology. They have stressed out in the answers that no adequate focus has been given to the aspects of the development of Information Communication Technology, artificial Intelligence that may be the new environment that a forensic accountant would have to engage himself in and the traditional training focused on detection and investigation on paper based or simple wired frauds will not be helpful in the investigation in to the frauds committed by and through Fintech and Artificial intelligence. Therefore the view of the majority of the students is that the courses must be focused in to the aspects of financial technology and artificial intelligence in to the aspect of the application of professional accounting skills, investigative skills, and an investigative mindset as required by the Investigative and Forensic Accountant’s standard practices.

The following table describes the categorized responses of the students who respondent to the questionnaire,

| Category | Irrelevant to the sphere of Forensic Accountants | Satisfied with the existing curriculum | Moderately satisfied with the existing curriculum | Not satisfied but no curriculum change required | Not satisfied and curriculum change required | Highly unsatisfied and need radical changes |
|----------|--|--|---|---|--|---|
| No. | 1 | 1 | 5 | 8 | 3 | 2 |

The part 4 of the questioner is a semi- structured question where the participants are required to answer within the space given and the said part has focused on the recommendations that the students would make in order to fill the existing the gaps (if any) with the training received and training that they ought to receive.

The analysis of the answers given to the said part 4 of the questionnaire reveals that the majority of the students have suggested that the practical knowledge in software that can be used for tracking frauds or other crimes including terrorism committed via Fintech and artificial intelligence or by the use of Developing Information and Communication technologies must be incorporated to the curriculum of the Forensic Accountants and also many have stated that practical knowledge as to how the software of tracking frauds or suspicious activities by the use of Fintech and artificial intelligence, be used. Therefore majority of the participants have stressed out that for modern day forensic accountants the skills, knowledge and expertise in the application of professional accounting skills, investigative skills, and an investigative mindset *per se* would not be sufficient but also would require the knowledge, skill and expertise in Information and communication technology, ***Fin Tech*** and artificial intelligence.

The following table describes the categorized responses of the students who respondent to the questionnaire,

| Category | Irrelevant to the sphere of Forensic Accountants | Need some knowledge of Fintech and AI | Need practical and theoretical skill and knowledge on Fintech and AI in the curriculum | Need to base the curriculum on Fintech and AI | The principles of Fraud investigation must be contextualized to suit the Fintech and AI and introduced to the curriculum |
|----------|--|---------------------------------------|--|---|--|
| No. | 1 | 3 | 5 | 8 | 3 |

4.2 Terrorism

The introduction to this research has briefly discussed about the terrorism with few definitions but under this session the subject of terrorism will be discussed in depth.

4.21 Definitions of Terrorism

1. U.S. Definition

U.S. Code of Federal Regulations has defined terrorism as "the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives" (28 C.F.R. Section 0.85).

2. Canadian Definition

In Canada the section 83.01 of the *Criminal Code* has defined terrorism as an act committed "in whole or in part for a political, religious or ideological purpose, objective or cause" with the intention of intimidating the public "...with regard to its security, including its economic security, or compelling a person, a government or a domestic or an international organization to do or to refrain from doing any act."

3. British Definition

The British Terrorism Act (2006), has referred to terrorism as to the use and threat of action "designed to influence the government or to intimidate the public or a section of the public" and "made for the purpose of advancing a political, religious or ideological cause."

4. EU's View on Terrorism

"Terrorism is a threat that does not recognize borders and may affect states and peoples irrespective of their geographical location. EU States and citizens are not an exception. Individuals and groups who believe that they can advance their political aims by using terror pose a serious threat to the democratic values of our societies and to the rights and freedoms of our citizens, especially by indiscriminately targeting innocent people. Acts of terrorism are

criminal and unjustifiable, and must be treated as such under all circumstances.” (EU Counter-Terrorism Strategy. 2005)

FBI Definition

International terrorism: Perpetrated by individuals and/or groups inspired by or associated with designated foreign terrorist organizations or nations (state-sponsored). E.g. the December 2, 2015 shooting in San Bernardino, CA, that killed 14 people and wounded 22 which involved a married couple who radicalized for some time prior to the attack and were inspired by multiple extremist ideologies and foreign terrorist organizations.

Domestic terrorism: Perpetrated by individuals and/or groups inspired by or associated with primarily U.S.-based movements that espouse extremist ideologies of a political, religious, social, racial, or environmental nature. E.g. the June 8, 2014 Las Vegas shooting, during which two police officers inside a restaurant were killed in an ambush-style attack, which was committed by a married couple who held anti-government views and who intended to use the shooting to start a revolution. (FBI.2019)

4.22 Conventional/ Traditional Terrorism

The conventional or Traditional Terrorism inter alia includes physical violence to either life or body or to property by use of destructive weapons such as Guns, rifles improvised weapons (modified guns, guns and rifles made by themselves), bombs, explosives and also knives and other such weapons.

In conventional or traditional terrorism the main aim of the terrorist organizations is to cause fear by causing deaths, bodily harm or property damage and thereby establish and strengthen their ideologies (Mohun R. 2012).

However the conventional terrorism with time can evolve into unconventional terrorism due to various reasons or while conducting conventional terrorist acts may resort in alternate to

modern unconventional terrorist activities. Generally the Terrorist groups would target to disturb the functioning of Government and other organizations, commit assassinations of public and famous figures, Hijack of planes & Ships, Hostage taking and Human trafficking.

4.23 Modern Terrorism Trends

The modern terrorism trends are not limited to causing violence and terror in the society by mere exertion of physical force which endangers life and property, but also have resorted to attack the economy of a nation or a state, cyber-attacks which can impact the day today lives of the society.

The modern terrorism has found various avenues to spread violence without physical use of force, the development information and communication has paved the way for many terrorist organization to conduct their terrorist activities un notices and leaving its adverse effects on the society.

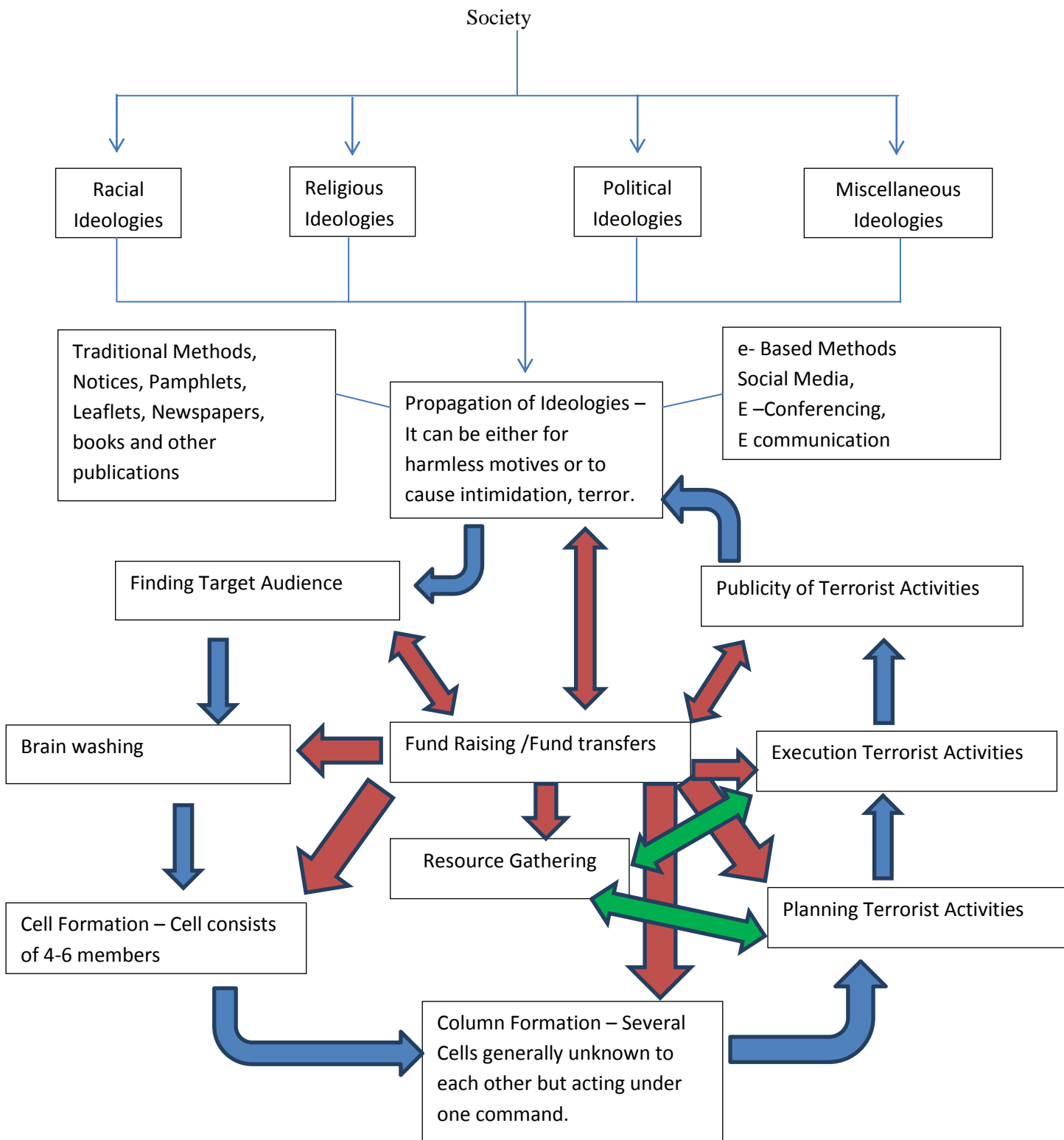
Cyber terrorism is one such method of modern terrorism, as per (Dorgul M, Aslan A and Celic E. 2011) “Cyber terrorism poses a direct threat to the security of the nations’ critical infrastructures and ITs as a low-cost asymmetric warfare element.”

Some examples for cyber terrorist attacks are as follows,

- a) Cyber terrorist attacks on Ukrainian banks, ministries, newspapers and electricity firms in 2017.
- b) Cyber terrorist attacks on Estonia in 2007 which crippled the entire service sector.

4.24 Terrorism Models/ Terrorism Tree, Terrorism Pyramids

Terrorism Model and Terrorism Tree

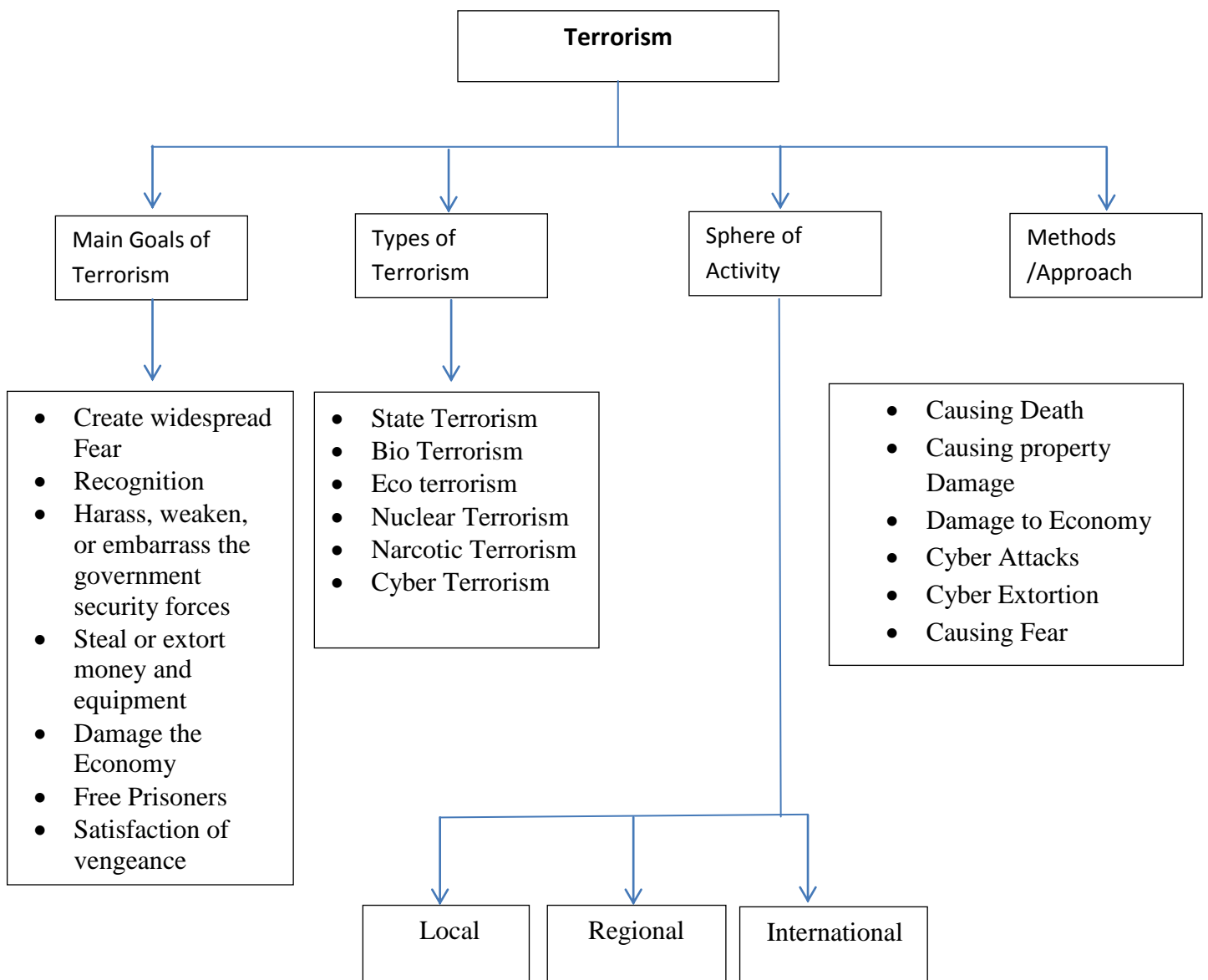


The above terrorism Model has been developed based on the information obtained from the questionnaire and the semi structure and interviews coupled with review of the existing literature with regard to terrorism.

According to the definition given for terrorism by many definitions the people or groups of people in a society may have their own ideologies as to the religion, politics, race and others and the said individuals or groups may often promote their ideologies and mere promotion of such ideologies per se would not instigate terrorism.

The terrorism will be instigated by the propagation of the ideologies in order to cause fear in the minds of the society in order to achieve the objectives of such individual or the group. The rapid development of information and communication technology and the popularized social media the individuals or groups that have the objective to cause fear in the society can easily propagate their ideologies and have a group of admirers or followers, long term relationships with such admirers and followers gets stronger they are gradually brainwashed and the most faithful followers will be used as terrorist cells or small groups of 04to 06. Gradually the cells are turned to terrorist columns where several individual cells under the leadership of one leader. Thereafter these columns or cells can plan and execute terrorist activities and once a terrorist activity is carried out again the same is used to gain publicity and further strengthen such terrorist organizations. This occurs as a vicious cycle, this entire process is fully dependent on fund raising and transfer of funds. Financial funding is essential for every terrorist group in order to function as the purchase of resources and the expenses for publicity, training and gathers members entirely dependent on the availability of funds. Therefore there is an immense duty on a forensic accountant to identify, track and trace from where the funds come and identify the channels and complex transaction that are used to transfer the funds raised to the terrorist organizations. Further the movement of funds of terrorist can be traced during resource and asset purchasing and thereby can inform the

authorities at to the possible terrorist activities. E.g. If the forensic accountant can locate that funds have been moved for purchase of weapons, then it is an indication that there would be a possible attack on life or destruction of property or a breach of peace. Therefore financial intelligence headed by a forensic accountant is highly important to combat global terrorism.



4.25 Aspects of Terrorism

There are many aspects and features of terrorism and terrorist groups in the world may differ from each other and will not share the features uniformly but some of basic such features will be common to all terrorist groups.

a) Goals/Objectives/Aims of Terrorism

The main goals of the terrorist organization inter alia are discussed as follows,

1. Create widespread Fear- The main objective is to cause fear among the society or the community in order to achieve the ideology of the particular terrorist group.
2. Recognition – Obtaining the recognition for their terrorist group and the underlying ideology of the particular terrorist group.
3. Harass, weaken, or embarrass the government security forces- impression that the terrorist organization is stronger than the government and the governing law, thus give the impression that the ideologies of the terrorist groups have a legitimacy within the said jurisdiction.
4. Steal or extort money and equipment- This is to cater their financial needs and to fulfill the requirement of resources like weapons and ammunition essential for the mission of the terrorist groups.
5. Damage the Economy - Discourage foreign investments, tourism, or assistance thus the public will lose faith on the government and will in turn establish the ideology of the terrorist groups.
6. Influence Governance – The terrorist groups will influence the critical decisions of the government and also intervene with the legislative process as well in order to show their upper hand.
7. Free prisoners- Freeing of prisoners mostly the allies and supporters of the terrorist groups
8. Satisfy vengeance- To take revenge on the society to establish their ideology.

(b) Types of Terrorism

1. Conventional Terrorism- This has been discussed in the one of the above headings thus it will not be discussed again.

2. State Terrorism- A state generally considered as not exercising terrorism but in some instances where a state uses force on its citizens without a declaration of war can in order to achieve its political or any other goal may amount to terrorism by state.

3. Eco terrorism – The destruction of property and threats on companies and organizations in business in environmental sensitive enterprises are targets of extremist environmental protective groups and are termed as eco-terrorists.

4. Bio terrorism –use of Biological agents like viruses Bacteria [Anthrax (Bacillus anthracis)] and other biological forms/agents in order to terrorize the society and achieve objectives of the terrorist groups.

5. Cyber terrorism- this has been earlier dealt with hence will not be discussed here.

6. Nuclear Terrorism- Exploitation of nuclear material by the terrorist as a terrorist tactic. They inter alia include attacks on nuclear facilities, purchasing or building nuclear weapons, or dispersing radioactive materials.

7. Narco Terrorism – This is twofold one being the drug traffickers use terror on the society to discourage the efforts of the government to combat drug trafficking and secondly the same refers to the means of fund raising by terrorist organizations.

Terrorism Pyramid

The terrorism pyramid describes the how a typical terrorist organization would have as a structure. The top of the pyramid is occupied by the groups who are responsible for

commanding and they are only a few of commanding personnel in an organization. In some terrorist organizations there is only one pyramid but in some terrorist organizations there may be more than one terrorist pyramid. The second level from the top of the pyramid is occupied by the active carder of the terrorist organization and they are responsible for the functioning, execution of the terrorist activities.

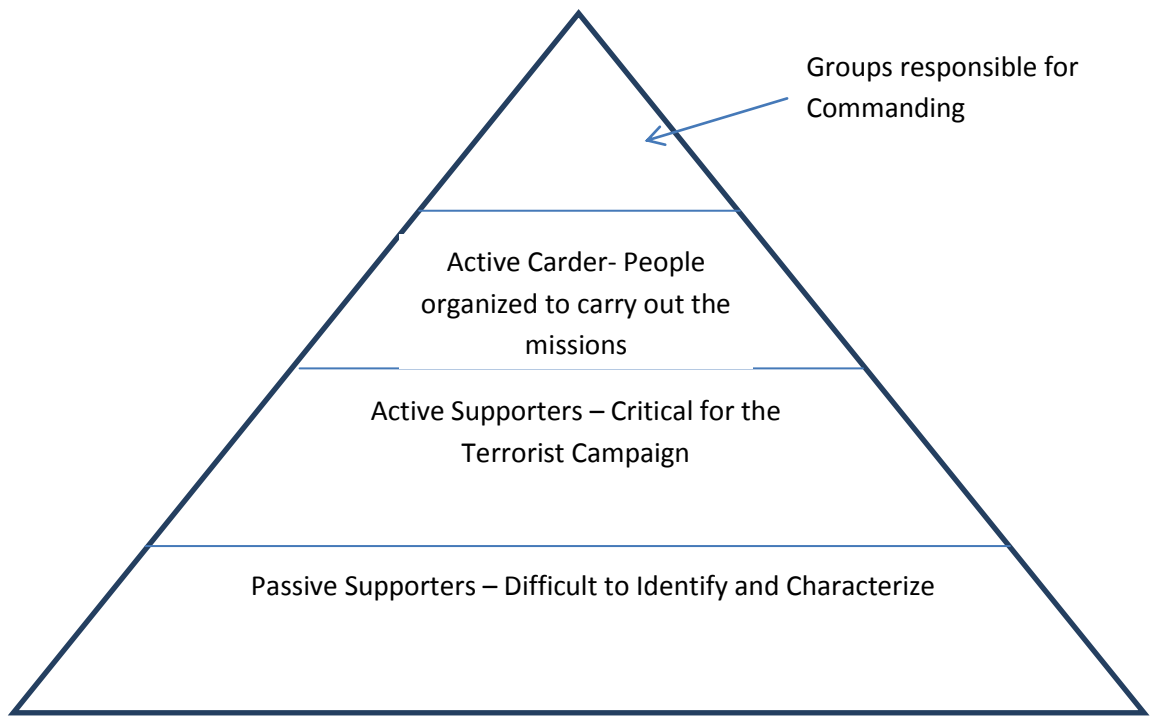
The 3rd level of the pyramid from the top is occupied by the active supporters and they are the key personnel in the campaigns of the terrorist organizations. Further the active supporters take a heavy burden of gathering funds for the terrorist organization. However since the active supporters do not actively participate in terrorist activities it is relatively difficult to track and trace the activities of the active supporters.

The most bottom level of the pyramid is occupied by the passive supporters and it is the most difficult task vested on the authorities as these groups can hardly be identified and recognized, the passive supporters without or rarely engage in any activity of the terrorist organizations but only admire the underlying ideology of that particular terrorist group.

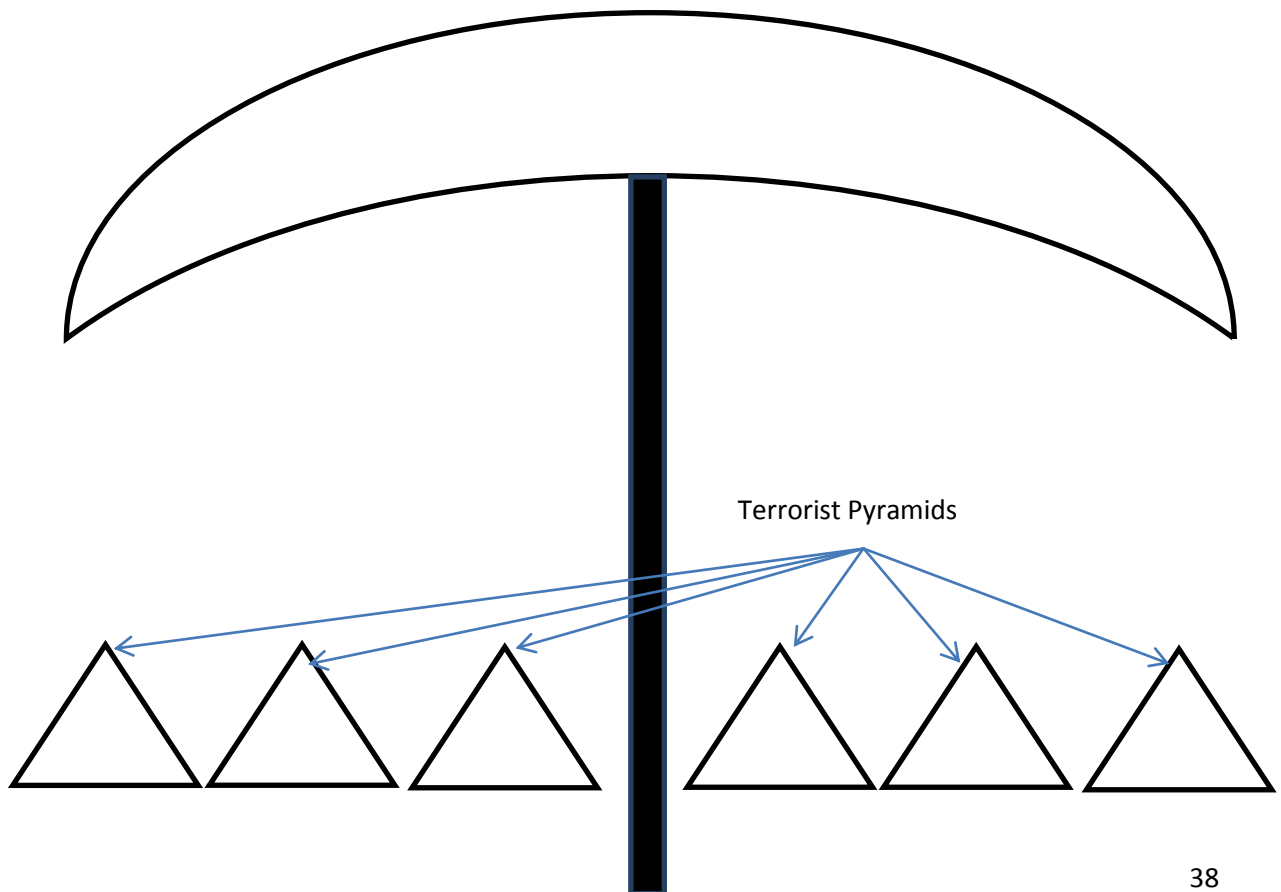
Umbrella Organizations

In some terrorist organizations several terrorist pyramids are protected by an umbrella organization the umbrella organization is responsible for the decision making, management and the functioning of the entire terrorist pyramids.

Terrorism Pyramid



Umbrella Organization



4.2 Terrorism and Finance in an environment of Fin Tech and Artificial Intelligence

a) Terrorism and Finance – Financial capacity or availability of sufficient funds is the key requirement behind every successful terrorist organization. Therefore in practice the terrorist groups have developed a local and international network where money is earned and are then passed through a series of complex transactions and finally are used to purchase resources needed or to purchase assets on behalf of the terrorist organization. The following topics of this study further elaborate the finer aspects of financing of terrorism in an environment of *Fin Tech* and Artificial Intelligence.

b) Fin Tech

Fintech is a combination of the two words “Financial Technology” and the said financial technology refers to a new technology which has been developed improve and automate the delivery and the use of financial services. The main function if *Fin Tech* is to help the consumers, companies and the business owners to manage their finances in a better way and more effectively. Specialized software and algorithms that can run on computers as well as on smartphones are used for the operation of *Fin Tech*.

Although *Fin Tech* was developed as a back-end systems for the established financial institutions however now the system has turned towards the customer orientated services, thus now *Fin Tech* covers different sectors such as banking, education, industries, fund raising and investment management. The most distinct feature of *Fin Tech* is that it is used to develop crypto currencies such as bit coins.

This new user friendly system is an instantaneous way of managing finances but can always be used to foster crimes including terrorism.

C. Artificial Intelligence

Artificial Intelligence is the development of the digital equipment with computer systems and algorithms with the ability to perform tasks which are performed by the use of human intelligence such as speech, communication responding to some external factor, visual perception, translation between languages and also decision making.

Artificial intelligence sometimes can be used to perform certain functions like monitoring and surveillance as the human intellect can easily miss out on certain aspects, therefore Artificial Intelligence is a useful tool when it comes to the tracking, identification of the movement of funds especially for the purposes of terrorism. Therefore the banks and other financial institutions can have the assistance of the purposes of Know Your Customer (KYC) and Anti Money Laundering (AML) practices to prevent fund gathering and transfer to terrorist groups.

Further this Artificial Intelligence can be used by the forensic accountants to identify and trace suspicious fund transfers and also to identify the channels, sources and destinations of the suspicious funds. The forensic accountant with the assistance of Artificial Intelligence and his professional accounting skills, investigative skills and investigative mindset can successfully partake in the combat of global terrorism in the rapidly developed information and communication technology.

4.31 Fund Raising for Terrorism

As already discussed at various stages of this study the main challenge for a terrorist organization is to raise sufficient funds in order to achieve their objectives. The fund raising can be through money obtained through lawful means and as well as unlawful means.

(a) Lawful Fund Raising

The lawful fund raising includes the profits gained out of the lawful businesses owned by the supporters or followers of the terrorist organizations. Sometimes the followers or members may donate some portion from their remunerations to terrorist groups. Further the terrorist groups by the income generated from their assets (which often in the name of a member or follower) may gather funds for their terrorist activities.

Various Non- Governmental-Organizations (NGOs) or Non Profit Organizations (NPOs) may sometimes donate funds to various terrorist groups. The most significant feature is that the sources of the funds are lawful or legal sources. Therefore less suspicion is attracted and this makes the tracing of lawful fund raising, a hard task. However the services of a well-trained skilled forensic accountant with the aid of artificial intelligence and other investigative software can trace the funds gathered by lawful means for illegal purposes.

The funds so gathered through lawful means can be directly transferred to the terrorist organizations or they can be introduced to various complex transactions where they are passed through various accounts of various persons to avoid suspicion and finally introduced to the system so the same can be appropriated by the terrorist organizations. The former is easy to track but the latter is a difficult process to track.

(b) Unlawful/Illegal Fund Raising

The money obtained from legal means will not always be adequate thus the terrorist groups usually resort to illegal means to fulfill their fund gathering. The main illegal means of fund raising by terrorist groups are discussed herein under,

Smuggling – Smuggling of various illegal items or other items by illegal means into various countries and obtain high amounts of money as commissions.

Human Trafficking – Transport of people of one country by illegal means (illegal migration), trade of male female and child sex workers and also slave trade is another lucrative means of income for the terrorist groups.

Drug Trafficking –Drug trafficking is the most popular avenue for raising funds needed for the functioning of the terrorist groups , some terrorist groups engage in drug trafficking and some other terrorist organizations provide the security needed for drug cartels.

Weapons Dealing –Weapons dealing is another form of income where the terrorist groups are engaged in the sale of weapons to other terrorist groups and others parties.

Money Laundering- Money obtained by illicit means are introduced back to circulation by a complex process of collection, layering and integration.

Identity Theft – The identity information in cyber space are stolen and are used for various illegal purposes such as money laundry, credit card frauds and other cybercrimes and thereby earn funds.

Theft & Extortion – Theft or extortion of property and resale of the same is another form of gathering funds.

Piracy – The word piracy has two meanings firstly the practice of robbing ships and attacking ships, secondly it refers to the use or reproduction of the work of the others. Both the forms are good ways to gather finances.

Cyber extortion & Cyber Crimes – The crimes committed through internet related devices is known as cybercrimes cyber extortion is the extortion done online.

4.32 Fund Transfers for Terrorism

a) The simplest form of fund transfer is the direct transfer to the terrorist organizations, here the case or certain resources that can be converted to cash can be delivered to the terrorist organizations or the funds can be deposited in a bank account where such terrorist organization has direct access. These methods are simple and fast, however such fund transfers can be easily detected.

b) The funds gathered on behalf of the terrorist organizations which are used for terrorist activities are usually transferred through the global financing system using various typologies and through a network of personal and business accounts. Unlike in the old banking systems the transactions can be done online therefore no person is needed to be physically before the bank, just a click of a button or a tap in the computer or smart phone is sufficient. To avoid suspicion of the banks which adopt KYC (Know Your Customer) and AML (Anti Money Laundering) practices the transferors deposit small amounts of money on a regular basis or deposit reasonable amounts to other bank accounts indication false purposes. Further using stolen identities and passwords of customers and thereafter the banking it done illegally (Identity theft) through the said stolen identities. Further investments on fictitious shell companies are another way of transferring money to the terrorist activities. Illegitimate charities, fictitious businesses, companies, Non Profit Organizations are also used to transfer money. Another method is the creation of fictitious bank accounts and use the same for money transfer Therefore the process of transfer of funds to terrorist organizations can be equated to the process of money laundering.

Although fund transfers to terrorist organization is similar to money laundering the main notable difference between the conventional money laundering and fund transfer for terrorism is that the money used for terrorism has a share of lawful money obtained from lawful means, thus it is easy to fulfill the 1st stage of the money laundering process namely, Placement.

The second stage where the money is passed is called as **Layering** and the same involves the process of illicit money to pass through various complex transactions and generally these transactions are complicated and spreads like a network in different channels and levels thus designed to obscure the audit trail and hide the proceeds. The layering is frequently done through shell corporations, offshore banks or countries where the laws and regulations are not strong enough to prevent the same or permit such activity.

The third stage of the financial transfer to Terrorism is called as **Integration**. This is the process where converted illegal proceeds are utilized to legitimate business as investments or purchase of assets, to show that the sources of the said funds are from legitimate sources like profits out of normal financial or commercial operations, In order to show that the said sources are legitimate, false invoices for goods exported, domestic loan against a foreign deposit, purchasing of property and co-mingling of money in bank accounts can be used.

The terrorist organizations use the money to purchase property or may invest in legal business to prevent suspicion or avoid tracking.

Unlike conventional money laundering the movement of funds for terrorism is hard to diagnose as a part or a considerable part of the funds placed in to the fund movement process are clean i.e. from the proceeds of lawful businesses, donations from charitable organizations, from employment etc. Thus the services of a qualifies, skilled, well experienced and well trained forensic accountant is a must in order to track down the patterns of which the funds

are placed as the placement is the most vulnerable stage in the movement of funds. Placement of money regularly to a certain bank account even it be a small amount by many may well be a red flag that the money is gathered for terrorism. In such cases follow up of the depositors and the tracking of the path of layering and locating its destination is helpful to identify to whom the funds have reached.

Practically even for the most qualified, skilled and experienced forensic accountant monitoring as such would be impossible on a regular basis, therefore the right technology coupled with the experience and skill of the forensic accountant will be helpful in fulfilling the said task, The latest technology available to track down is the artificial intelligence and the same is faster and reliable than the human mind in tracking down patterns of placement and layering in order to ascertain the sources and the destination of fund movements.

4.33 Ethical Limitations of a Forensic Accountant When Conducting Anti-Terrorism Investigations.

The conduct of anti-terrorism or tracking down of funds transferred to terrorist organizations by forensic accountants is not limitless as they are unless representing a government anti-terrorism agency.

The forensic accountants are bound by a code of ethics and standards and accordingly an investigation or any other engagement must be carried out in accordance with the code ethics of the professional body for which the forensic accountant belongs to.

An Investigative and Forensic Accounting (IFA) under the professional scrutiny of Chartered Accountants of Canada, is basically expected to adhere to in all times to the IFA standard Practices.

According to the SP 100.02 of the IFA standard it is the minimum standards that the IFAs are to adhere to, thus is mandatory for every IFA practitioner to practice in accordance with the said IFA standard Practices.

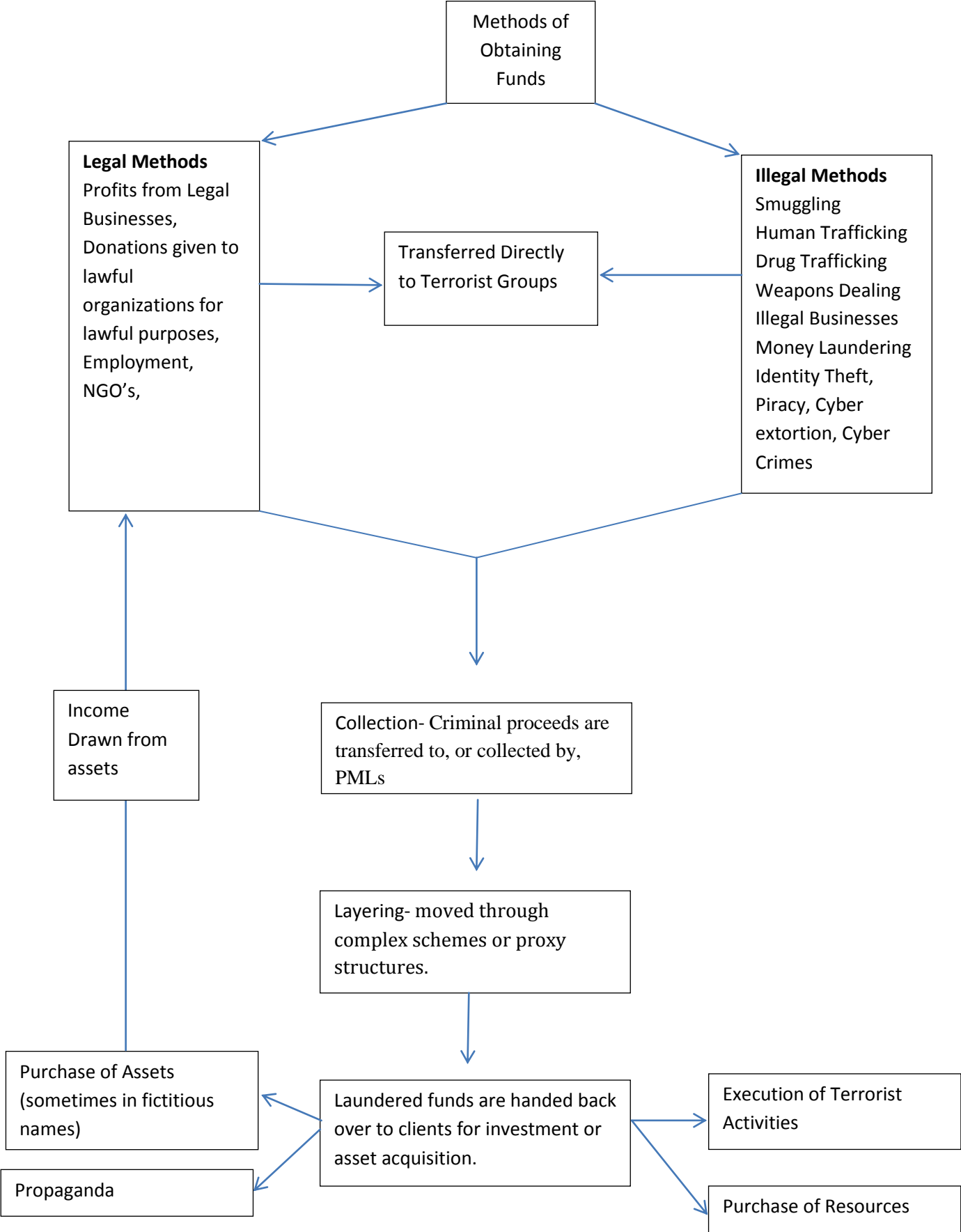
The SP 100.04 of the IFA standard practices has stipulated that the adherence to the minimum standards are “needed to protect the public interest by ensuring consistency to a minimum standard of practice”.

However not all the ethical obligation of an IFA are codified in the standard practices, the ethical considerations like conflicts of interests are in the IFA standard practices ,but ethical considerations like unauthorized entry to systems and unauthorized surveillance may fall outside the ethical limits of the forensic accountant and be illegal as well.

Therefore a forensic accountant, on his own would not be able to trace the fund movements and even the forensic accountants hired by the financial institution or banks may also be bound by certain ethical and legal considerations in regard to data privacy and confidentiality of information of the customers.

However if a forensic accountant who is working for an authority related to combatting terrorism or prevention of money laundering he may be able to work in contravention of the ethical considerations but certainly within the law.

Fund Raising/ Fund Transfer Model in Terrorism



4.3 Forensic Accountant and Prevention of Global Terrorism

The forensic account has a key role to play in identifying, tracking and tracing fund raising and fund transfers (as already discussed in the topics above). This new role that has necessitated by the increasing number of terrorist activities both in the local and the global level and it may well differ from the role of the traditional forensic accountant.

4.41 Role of a Conventional Forensic Accountant

The role of a conventional forensic accountant has been described by (Owojori, A & Asaolu.O, 2009) as *“Forensic accounting is the practice of utilizing accounting auditing and investigative skill to assist in legal matter and the application of specialized body of knowledge to the evidence of economic transaction and reporting suitable is the purpose of establishing accountability or valuation of administrative proceeding. In wide sense, it can be said as the integrity of accounting auditing and investigative skill to abstain a particular result”*.

Accordingly the main functions of the traditional/ Conventional a forensic accountant is the auditing and accounting and using the said accounting skills and auditing skills in application of the same in given circumstances to conduct investigations in regard to financial fraud, quantification of damages etc. In doing so the forensic accountant is expected to gather evidence and to preserve the same as the same may be useful for litigation purposes. Further the forensic accounts may sometimes be called to testify as an expert witness and be required to act impartially without being biased.

The Standard practices of IFA in 100.08 has stipulated a forensic accountant who undertakes Investigative and forensic accounting engagements are required to, apply professional accounting skills, investigative skills, and an investigative mindset.

According to Aderibigbe (2000) a forensic accountant is required to exercise a high level of competence, integrity and honesty in his role as a forensic accountant. He has further opined that a thorough training and proven competency by passing all relevant examinations held by a recognized accounting body.

Further he has emphasized that a forensic accountant in the exercise of his duties must always work with honesty and integrity and is bound to exercise a “professional attitude” in performance of his duties and responsibilities. Another important aspect is the skill that must be acquired by a forensic accountant from trainings obtained during the training years.

4.42 Role of a Modern Forensic Accountant

Role of a modern forensic account in addition to the role of the conventional forensic accountant must meet the challenges of the rapidly developing information and communication technology. The rapidly developing information and communication technology and the use of *Fin Tech* (financial technology) has paved the way to do financial transactions online instantaneously and in doing so there is no need to verify the physical identification but the identification is totally dependent on the usernames, passwords or sometimes retina scans and scanned thumb impressions where it is possible to do frauds as to the identity theft. This especially makes the fraud investigation in the modern more difficult for the forensic accountants.

In such a context the forensic accountant has to think out of the box in order to handle such investigations in a *Fin Tech* environment and it is expected from a modern forensic investigator to be familiar with *Fin Tech*, information and communication technology and software which are capable of identifying tracking money transfers within the limits prescribed by the law as the law in sometimes prevent the tracking of certain data as the same may be protected by the personal data protection laws, thus the forensic accountant has to be mindful of his limitations as well.

(Crumbley,L. 2017) in his text book in part 4 deals extensively with the aspects of cybercrimes and in chapter 13 of the same deals with “Investigation of Electronic Data: A Brief Introduction” where it has focused on electronic evidence and electronic evidence gathering. The chapter 14 of the same deals with the “Digital Forensic Analysis” where the focus is given to a variety of topics such as collection of electronic evidence and analysis of the same, technical searches as to impart knowledge about how to do the searches, what are the means of the searches and the exercise of due diligence in conducting electronic investigation.

In comparison with the conventional forensic accountancy which existed few decades back *per se* is not in accordance with the modern needs that have sprung as a result of the rapidly developed information and communication technology where the same is used to commit various offences involving financial frauds. Therefore the role of a forensic accountant has become much broader than what it was.

4.43 Role of a Forensic Accountant in Combatting Global Terrorism

The forensic accountant in combat of terrorism has an extended role than a modern forensic accountant. It is already discussed in this study how important the role of a forensic

accountant is. In the above discussion it was focused on what should be done by a forensic accountant in combatting terrorism.

The main role of a forensic accountant in combat of global terrorism is, whether he may be a forensic accountant in a bank or other financial organization or in a government agency in combat of terrorism, to have a plan to identify track or trace financial movements i.e. identify how the funds are gathered, how the funds are moved or transferred and also find where such money ends.

Further the action plan of the forensic accountant must also address as to how to prevent gathering of funds within the legal framework especially with the legal sources of funds and movement of funds through series of bank accountants, shell companies and businesses. Further the same must address on measures in preventing the appropriation of transferred by the terrorist organizations in order to commit acts of terrorism i.e. the use of funds to purchase explosives, weapons, training of insurgents, propaganda and planning of terrorist attacks.

In order to have the ideal action plan the forensic accountant must have the knowledge, skill and expertise needed to identify, track, trace and prevent fund gathering, funds transfers and appropriation of funds for terrorist activities in an online environment where it is possible to do financial transactions almost instantaneously.

The forensic Accountant in order to do so must have not only the Professional Accounting skills, Investigative skills and Investigative mindset, but also needs the skill of new software for detection of suspicious banking and financial practices and build profiles in a *Fin Tech* environment. The forensic accountant must also be thorough in the use of Artificial Intelligence in his sphere of work in combatting terrorism.

In order to freeze the assets of terrorist organizations or to prevent fund raising and transfers or to track bank accounts there may be instances where a court order would be necessary to do the same, in the process of obtaining a court order the court would in many instances require *prima facie* proof of such suspicious activity. Therefore the role of the forensic accountant in combat of terrorism would also include gathering of vital evidence mostly in the cyber form and the collected evidence must be preserved and analyzed to build up a story.

Therefore the skill in artificial intelligence, computer and internet based operations, ***Fin Tech*** in the forensic accounting and investigation field are essential for a forensic accountant in the field of combatting terrorism.

Chapter 05 - Recommendations, Conclusion, Limitations and Future research

The main objective of this research is to explore the role of a forensic accountant in combatting terrorism in a *Fin Tech* environment, thus the skills, knowledge and the expertise of a conventional forensic accountant as oppose to the skill, knowledge and the expertise ought to have been possessed by the forensic accountant combatting terrorism.

The main research objectives developed upon review of literature are as follows,

1. To identify and analyze the Traditional role of a Forensic Accountant in Canada, and USA.
2. To identify and analyze the role of a Forensic Accountant in Canada and USA in the context of Engagements regarding National Security and Defense with especial focus to prevention of Terrorism.
3. To identify and critically analyze the Skill that needs to be acquired and developed by forensic accountants engaged in investigations regarding internal and cross-border fund transfers by terrorist groups through the use of Novel Information and Communication technology.
4. To formulate and synthesize a model as to how the forensic accountants engaged in investigations regarding internal and cross-border fund transfers by terrorist

groups through the use of Novel Information and Communication technology can be effectively trained.

4.1 Conclusion

Based on the discussion and the analysis of the literature and the data obtained by the semi structured interviews and the questionnaire, it was identify that the Traditional role of a Forensic Accountant in Canada and USA is basically pivoted around the development of skill, gaining knowledge and expertise on the professional accounting skills, Investigative skills and the investigative mindset, in USA too the conventional forensic accountant is expected to be a specially skilled accountant with a high degree of investigative skills and the ability to plan, conduct and prepare a sound report, further gathering preserving and analysis of evidence is also an integral part of a conventional forensic accountant.

The role of a Forensic Accountant in Canada and USA in the context of Engagements regarding National Security and Defense with especial focus to prevention of Terrorism basically deals with the need to identify, track and trace the gathering of funds, placement of funds, transfer of funds and also appropriation of funds that are used for terrorist activities, this alone is not sufficient as the forensic accountant is the ideal person to come up with solutions to prevent fund raising done under the legitimate labels and prevent the same from placement, transfer of funds and appropriation of funds for terrorism. Thus it can be concluded that the role of a forensic accountant is highly important in combatting terrorism as almost all the terrorist organizations are highly dependent on the availability and instantaneous transfer of funds needed for publicity, propaganda, training, purchase of resources, planning and execution of terrorist activities as planned.

In the chapter 4 under the discussion and analysis of the Skill requirement of a forensic accountant engaged in combatting terrorism that needs to be acquired and developed by forensic accountants engaged in investigations regarding internal and cross-border fund transfers by terrorist groups through the use of Novel Information and Communication technology. Accordingly the said discussion revealed that unlike a conventional forensic accountant a forensic accountant who in into combatting terrorism must have a very sound knowledge in information and communication systems, Fin Tech, artificial intelligence, advance computing, and software and other advanced means of identifying, tracking suspicious placements, fund transfers and the destination of the funds so transferred and how and for what purpose the said funds are used. Therefore a forensic accountant in combat of terrorism whether it may local, regional or global terrorism, he must be extremely conversant with the new technology including artificial intelligence in order to prevent funding necessary for terrorism.

In the above circumstances it can be concluded that on the strength of the analysis of primary data and the available literature the following hypothesis can be answered as follows,

Hypothesis 1, which is

“Skills, knowledge and expertise possessed by traditional, conventional forensic accountants are in adequate to address the issues of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology”, can be answered affirmatively.

Hypothesis 2, which is

“The skill, knowledge and expertise in relation to online and cloud transactions including e-commerce and m-commerce, of forensic accountants needs to be

improved in order to address the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology” can be answered affirmatively.

Hypothesis 3, which is

“The present system of training and curriculum for forensic accounting students does not adequately deal with the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology”, can be answered affirmatively.

4.2 Recommendations

It has been revealed by the analysis of primary data and literature available there is a gap in the real situation between the actual skills, knowledge and the expertise possessed by forensic accountants as opposed to what the skills, knowledge and the expertise ought to have been possessed by the forensic accountant combatting terrorism.

Therefore the following recommendations can be made as to how the forensic accountants engaged in investigations regarding internal and cross-border fund transfers by terrorist groups through the use of Novel Information and Communication technology can be effectively trained.

The recommendations are as follows,

1. Incorporate combatting terrorism as a part of the curriculum in forensic accountant Training courses and programmes.
2. Incorporate study of *Fin Tech* and artificial intelligence as a part of the curriculum in forensic accountant Training courses and programmes.

3. Incorporate practical training regarding the use of software for online fraud detection and artificial intelligence and algorithms to identify, locate suspicious patterns, as a part of the curriculum in forensic accountant Training courses and programmes.
4. Incorporate study of *Fin Tech* and artificial intelligence as a part of the curriculum in forensic accountant Training courses and programmes.
5. Incorporate training sessions with government agencies which handle cyber terrorism, cyber-crime prevention and terrorism prevention as a part of the curriculum in forensic accountant Training courses and programmes.
6. Incorporate the skill development programmes as to the gathering of digital and cyber evidence and methods of analysis of the same and preservation of such evidence as a part of the curriculum in forensic accountant Training courses and programmes.

4.3 Limitations

1. Time – The time allocation is highly insufficient to present a full scale research as the gathering of primary data in the form of semi structured interviews from selected professionals and in the form of questionnaires from students takes a long time and analysis of the same is also time consuming therefore the time constrain was the major limiting factor for this research.
2. Availability of Resources – The availability of books, journals in regard to the area of prevention of terrorism funding and the role of the forensic accountant in the same is yet another limitation for the research.

3. Wide Scope of Study Required – Pervious researches have not covered this area of study thus there is a wide gap and this research intends to fill only a part of the said lacuna and it is impossible to cover the entire lacuna therefore only a part of lacuna is partially addressed by this study.
4. Lack of previous research – Lack of previous research on this area has somewhat broadened the scope of this study resulting in lowering the depth of the study.

4.4 Future Research

This study only focuses of the role of a forensic accountant in combatting terrorism in *Fin Tech* environment and the need of development of skills, knowledge and the expertise to deal with the same.

However within this study there are many untouched areas as sub topics that come under the concept of *Fin Tech* such as crypto currencies and funding terrorism. Further this study only deals with the use of artificial intelligence in combat of financial aspects of terrorism surfacely thus it is another area that can be dealt with in depth.

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Appendix - 1

Semi structured Interview Format

1. Name (Optional) –
2. Occupation –
3. Experience
4. Experience in activities related prevention of terrorism
5. General Idea about the following topics,
 - a. National Security
 - b. Defense
 - c. Global Terrorism
 - d. Prevention of Global Terrorism
6. General Idea about the Challenges in prevention of terrorism in the modern context of well- developed Information and communication technology. (including online and cloud transactions)
7. General Idea about the role of a traditional forensic accountant in prevention of terrorism.
8. Does the skill, knowledge and expertise of the Forensic accountants adequate to address prevention of terrorism in the modern context of well- developed Information and communication technology. (including online and cloud transactions)
9. How should the skill, knowledge and expertise of the Forensic accountants be improved (if needed) to address prevention of terrorism in the modern context of well- developed Information and communication technology. (including online and cloud transactions)

10. Does the present system of training and curriculum for forensic accounting students adequately deal with the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology?
11. Will it be viable and suitable to modify the curriculum and training programme which has incorporated subjects to address the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology ?
12. Any other Ideas or comments

Appendix – 2

Questionnaire

Name –Optional

Part 1

1. Terrorism is correctly defined as?
 - a. Charitable services by Non Profit Organizations
 - b. The unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.
 - c. Smuggling of narcotics.
 - d. Hunting wild animals by using dangerous weapons.
2. The main goals of Terrorism are?
 - a. Causing Terror in the society, Recognition, Promotion of underlying Ideology.
 - b. Cause Amusement, Laughter and Joy
 - c. Earn Profits, smuggle drugs, promote illegal Businesses
 - d. Weapons dealing, Political power, Stability of Government

3. Which is not a main type of terrorism?
 - a. Conventional Terrorism, Economic Terrorism, Cyber Terrorism
 - b. Narcotic Terrorism, Eco Terrorism, Nuclear Terrorism
 - c. Christian Terrorism, Islamic Terrorism, Guerilla Terrorism
 - d. Economic Terrorism, Nuclear Terrorism, State Terrorism

4. A terrorist cell is a?
 - a. A Terrorist group that consists of 40-50 carders
 - b. A group drug smuggler that consists of 10-20 members
 - c. A pack of explosives in a metal container.
 - d. A Terrorist group that consists of 4-6 carders

5. Modern Terrorism is best described in?
 - a. Entirely focused on causing damage to body and property.
 - b. Entirely focused on the banking and financial transactions.
 - c. A combination of various of types of terrorist activities both in the form of physical violence and non- physical violence.
 - d. A combination of guns and explosives to cause violence.

Part 2

1. Fin Tech is best described in?
 - a. The innovative technology in the financial service sector to improve the efficiency of the financial services.
 - b. Use of mobile phones for social media
 - c. Use of computers for graphic designing.
 - d. Use of engineering technology to preserve dolphins.

2. The 3 stages of money laundering are correctly indicated in,
 - a. Adding, Subtracting and Multiplication
 - b. Placement, Layering and Division
 - c. Placement, Completion and Integration
 - d. Placement, Layering and Integration

3. What is not an example for illicit funds gathering?
 - a. Proceeds from profits of a business
 - b. Proceeds from remuneration
 - c. Proceeds from drug smuggling
 - d. Donations

4. Correct examples for Fin Tech are given in,
 - a. Online Banking, Online Insurance, Crypto currencies
 - b. Crypto Currencies, Actual Currencies, Online Banking.
 - c. Manufacture of Bread, Crypto Currencies, Film productions
 - d. Online Banking, Crypto Currencies, Wheat Cultivation

5. Appropriation of Funds for terrorism is correctly mentioned in,
 - a. Purchase of weapons, purchase of assets on behalf of the terrorist organization
 - b. Purchase of weapons, sale of drugs, sale of weapons
 - c. Wheat cultivation by transferred funds to show that the money is licit, sale of drugs
 - d. Sale of books containing ideology of the terrorist groups, donations

Part 3 –Semi-structured Questions

1. General Idea about the Challenges in prevention of terrorism in the modern context of well- developed Information and communication technology. (including online and cloud transactions)
2. General Idea about the role of a traditional forensic accountant in prevention of terrorism.
3. Does the skill, knowledge and expertise of the Forensic accountants adequate to address prevention of terrorism in the modern context of well- developed Information and communication technology. (including online and cloud transactions)
4. How should the skill, knowledge and expertise of the Forensic accountants be improved (if needed) to address prevention of terrorism in the modern context of well- developed Information and communication technology. (including online and cloud transactions)
5. Does the present system of training and curriculum for forensic accounting students adequately deal with the needs of National Security, Defense and prevention of terrorism in the context of modern well developed Information and Communication Technology?