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TRADE-BASED MONEY LAUNDERING: AN OBSTACLE TO TRADE FACILITATION

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Abstract

Money laundering has become an international challenge and now it is a multidisciplinary topic. The amount of global money laundering has been estimated about 2-5 percent of the world Gross Domestic Product. Criminals have misused the financial liberalization policies advocated by the International Monetary Fund for laundering criminal proceeds. The author points out that regulations and laws on financial sector, however, could considerably control the money laundering and as a result, launderers gradually move to the trade sector.

In author's opinion, international trade is subject to range of vulnerabilities and risks today owing to exploiting trade simplification proceedings. Therefore, the author highlights the importance of being aware of these risks.

By surveying diverse techniques and approaches to the problem in the literature, this study, therefore, examined the threats associated with trade facilitation that can be exploited by money launderers. The author also tried to find suitable anti-money laundering policies which cannot impede the expectations of trade facilitation.

In the study, the author used general scientific methods: analysis, synthesis, comparison, generalization.

Developed mathematical tools are described in the study as instruments to trace anomalies in trade transactions. The author's major recommendations are make use of such analytical tools by establishing a permanent unit to frequently analyze the trade data so as to detect illicit transactions.

The author also reveals some shortcomings pertaining to anti-money laundering policies in fighting trade-based money laundering. Basically, staff attached to the customs, tax authorities and law enforcing agencies have relatively low knowledge on trade-based money laundering compared to their knowledge on other means of money laundering.

In conclusion, the author states that frequent analyses of trade data and sharing of information and knowledge with other local and foreign agents seems to be more effective policies in controlling trade-related money laundering.

Key words: money laundering, anti-money laundering measures, trade-based money laundering, trade facilitation, illicit transactions, illicit capital flow, trade misinvoicing.

Introduction

Since the liberalization of financial markets is an important requirement for the macroeconomic efficiency, nowadays both developing and developed countries tend to pursue the liberal policies advocated by the International Monetary Fund. But it has been observed that openness of international financial markets also opens up more channels for laundering illicit money. However, several measures have been enacted to successfully manage the financial markets. As a result, criminals move to trade sector finding new avenues and posing threats on trade. On the other hand,

Ferwada et al. (2013) find the strong positive correlation between licit trade volume and illicit trade. Financial Action Task Force (hereinafter FATF) (2010) also exposes the misuse of trade facilitation measures for ML. Thus, now it is a real challenge to implement trade facilitation events while combating the trade-based money laundering (hereinafter TBML).

Discovering more and more sophisticated and complex means, money launderers acquire substantial portion of world economy. In 1996, it has been estimated that aggregated money laundering (hereinafter ML) may be between 2 percent and 5 percent of the world's gross domestic product (GDP) (Moulette, 2000). Agarwal and Agarwal (2006) estimate that global ML amounts more than USD 2.0 to 2.5 trillion or about 5-6% of the world's GDP in 2006.

There are three basic methodologies followed in ML: misuse of financial sector, physical movement of cash using cash couriers and physical movement of goods through the trade system. Internationally and as individual countries, a considerable attention has been drawn to implement anti-money laundering (hereinafter AML) on financial sector and control the physical cash movement. But FATF highlights that the scope for misuse of international trade system has been received relatively little attention though trade system is subjected to high risk and vulnerability that can be exploited by the criminals (FATF 2006, p.1).

This study, therefore, tries to deeply examine methods of TBML and existing AML measures related to TBML to understand the risks and vulnerabilities associated with international trade system which can be misused. Moreover, this study also finds effective AML policies which can be applied without impairing trade facilitation measures. As suggested by many previous works, ML movements can be clearly detected by analyzing trade data (FATF 2006, Zdanowicz 2009, Ferwada et al. 2013). Hence, TBML can be effectively controlled by setting up a data analysis unit in relevant authorities to analyze data using developed mathematical tools and by exchanging information with other local and foreign institutes.

The next section of this paper discusses the global ML problem. The third section describes the stages of ML process which will be more useful to identify ML strategies. The fourth section examines the TBML methodologies evaluating the combating measures. Finally, I conclude the paper providing some recommendation to control the TBML problem.

1. Global problem of money laundering

ML can be simply defined as the processing of criminal proceeds to disguise their illegal origin in order to legitimize the ill-gotten gains of crime (FATF 2009, p.9). Launderers can be drug traffickers, organized criminals, terrorists, arms traffickers, blackmailers, tax evaders or credit card swindlers etc. They need ML for several reasons: to hide their wealth, to avoid prosecutions by distancing themselves from illegal money, to evade taxes, and in general to legitimate their illicit funds and to invest them to gain more profits (AUSTRAC 2008, p.2).

1.1. Measuring the scale of ML

Since all practices of ML are concealed activities, direct observation by the macroeconomists or statisticians is impossible (Quirk 1996, p.3). It is, therefore, difficult to directly calculate the size of the ML. Instead, many researchers use several techniques to estimate it. As Unger (2009) states there are three promising methods to estimate the scale of ML: application of gravity model, observation of abnormal prices for TBML and use of theory for measurement.

John Walker introduced the gravity model to measure global ML (Walker 1999). This is the widely used model and commonly known as "Walker gravity model". His study in 1999 estimates the total global ML of over USD 2.8 trillion per year, heavily concentrated in Europe and North America. Moreover, 46.3 percent of the global ML originates in the US (Walker 1999). Zdanowicz (2009) observes abnormal prices in US trade data to estimate volume of TBML and finds 7.34 percent share

of trade moved out of US while 9.77 percent moved into US in 2004. Another similar study by Boyries, Pak and Zdanowicz (2005b, p.259) finds during the period from 1995 to 1999 capital flight from Russia to US was USD 8.92 billion. This resulted from USD 7.24 billion under-invoiced exports from Russia to the U.S. and USD 1.68 billion over-invoiced imports into Russia also from the US. Argentiero, Bagella and Francesco (2008, p.11) use theoretical approach, that is “two sector model” to estimate the global ML and its size is approximately 12 percent of the world GDP.

Another method is the use of Multiple Indicators and Multiple Causes (MIMIC) model, and Schneider (2008) employs the model for 20 highly developed countries. He finds that USD 273bn were laundered in these countries in the year 1995 and increased to USD 603bn in 2006 (Schneider2008, p.26).

Because of different estimation methods, estimated amounts are not consistent or not comparable with each other. On account of such calculations it is clear, however, substantial amount of criminal money flows exist in worldwide making the considerable impact on world economy.

1.2. Adverse consequences of money laundering

Disguising of illicit proceeds obstructs the world economic development and depresses the economic growth (Kumar 2012, p.115). By using cross-sectional data of 19 industrialized countries, Quirks (1996) employs statistical analysis to quantify the macroeconomic consequences of money laundering. He estimates that for each 10 percent rise in ML is associated with the 0.1 percent reduction in annual GDP growth rate. Ogbodo and Mieseigha (2013, p.174) summarizes adverse impacts on macroeconomic performances of countries as “policy mistakes due to measurement errors in national account statistics, volatility in exchange and interest rates due to unanticipated cross border transfers of funds; the threat of monetary instability due to unsound asset structures; effects on tax collection and public expenditure allocation due to misreporting of income; misallocation of resources due to distortions in asset and commodity prices; and contamination effects on legal transactions due to the perceived possibility of being associated with crime”.

Since illicit money is generated from the criminal activities facilitating corruption and crime, it damages social stability of a country. ML adversely affects financial sector impairing the development of financial institutes by corrupting employees and institutes, and by damaging the customer trust. It destructs external sector of a country impairing trade and international capital flow. Illicit capital flow drains scarce resources of developing countries and tends to import luxury and less important items. Global sector is also negatively affected since launderers misuse foreign jurisdictions with liberal financial regulations to infiltrate criminal proceeds by corrupting market systems (Kumar 2012, p. 118).

Criminals usually invest money diverting resources to less productive economic activities. Sometimes small economies become favorable for their investments for a short time finally resulting in severe macroeconomic instability. Gnutzman, McCarthy and Unger (2010, p. 251), however, show that small developing or transitional economies which are unattractive for foreign direct investments can gain by attracting illicit money thereby opening “dancing with the devil” and on the other hand, very little might lose from doing so.

1.3 Anti-money laundering measures

The fight against the ML is relatively new approach. FATF is the inter-governmental body established with the support of the G-7 group of countries in 1989 to act against money launderers. The main purpose of this organization is, to develop and to promote the national and international policies against ML and terrorist financing. FATF issued 40 recommendations on ML in 1990 and again added another 9 recommendations on terrorist financing in 2003. As per these

recommendations, FATF periodically gather statistical reports from various jurisdictions to evaluate the functioning of their AML measures.

The FATF also sponsored to establish the regional AML organizations like Asia-Pacific Group on ML (APG), the Caribbean Financial Action Task Force (CFATF) and the Select Committee of the Council of Europe. The Egmont group was also founded by gathering financial intelligence units (FIUs) from 40 jurisdictions. It facilitates communication among FIUs and provides technical assistance to run effective FIUs around the world (Buchanan 2004, p.124). Intelligence gathering is crucial to move the power away from money launderers. FIUs collect and analyze this intelligence and other relevant authorities like customs, law enforcing agencies and tax authorities feed the FIU with information (Deleanu 2013, p.472).

Besides international organizations, some countries also amended or established laws and regulations targeting the strengthening of AML measures. US Patriot Act, the legislative response for 2001 terrorist attack, is one example. The UK introduced Proceeds of Crime Act in 2002 and approximately GBP 300 million of criminal money were forfeited (Sproat 2007, p.183). Since 2007, EU implemented regulation on customers to produce report when the transactions exceed the Euros 1500 to produce a report. In 2007 a total amount of Euro 114 million was frozen based on suspicious ML activities as reported on the 1085 suspicious reports (Schneider & Windischbaur 2008, p.398).

Most of the AML measures curtail vulnerabilities in the financial sector by regularizing financial institutes. Vlcek (2010, p.1) studies on Bahamas and argues that regulations can reduce the contribution provided by the offshore financial sector to the country's economy. He further states that new compliance and regulatory arrangements are comparatively costly since the offshore financial sector in Bahamas ensures less adverse impacts compared to other small Island states.

However, it is not difficult to control financial institutes by enacting regulations and obligations under the supervision of local authorities. Successful control of ML in the financial sector limits the ML avenues. Hence, criminals switch from the more controlled banking sector into still less controlled other sectors (Unger & Hertog 2012, p.288). It has been observed that launderers gradually exploit trade sector in order to escape from strictly controlled financial market (Ferwada et al. 2013, p.3170).

2. Process of money laundering

It is crucial to correctly understand the stages followed in ML in order to make proper investigation. In the literature, ML process is generally divided into three stages: placement, layering and integration. But, Koningsveld (2013, p.442) argues that this three-stage classical model is not sufficient to describe the current practice of ML. Instead, he further divides the final stage of the classical model into two stages; justification and investment. This justification-stage clearly highlights the place where the money re-emergence into the formal economy enabling to find the destination of money comes from. During the process of ML, illicit money earners usually find solutions to two basic problems: concealing the actual origin of the money and giving the legal origin to money. Koningsveld (2013) further states that action of giving the legal origin to ill-gotten money is mainly taken place at justification-stage. Since it is more appropriate to analyze the TBML process incorporating justification-stage, this study also applies Koningsveld's four-stage model: placement, layering, justification and investment.

2.1. Placement

At the initial stage of ML, illegal earnings and funds are infiltrated into the mainstream financial system. As it has been mentioned earlier, there is an obligation to banks to report to authorities when any deposit or withdrawal exceeds the given threshold amount. For example, in the US that threshold is USD 10,000 and in the EU countries Euro 1500. Thus, it is not simple to bank the

bulk of dirty money at once. Structuring and smurfing are two alternative methods heavily used to avoid such reporting. Multiple cash deposits or withdrawals at amount below the reporting threshold are used in “structuring” while multiple deposits of cash and purchase of low-value monetary instruments from various banks and money services by various individuals are used in “smurfing”.

Sometimes criminals purchase existing banks or open new banks in offshore countries to further control financial system. And also, corrupted bank officers are commonly used to infiltrate incriminated money directly into banking system without attracting the attention of the supervising authorities (Schneider & Windischbauer 2008, p.395). Conversion of cash to negotiable instruments such as traveler’s checks, cashier’s checks and money orders is another technique applied for placement.

Most of the illegal activities generate cash profits and it is difficult to manage a bulk of cash. Sometimes such a bulk of money is exchanged to larger denominations, to make it easy to be transported and to be converted. Yet, the level of risk is very high in the placement stage (Buchanan 2004, p.117).

2.2. Layering

After infiltrating into the financial system at the placement stage, money becomes movable and ready to use for different purposes. So as to further conceal the illegal origin of them and to make them more useful, the funds must be moved, dispersed and disguised. Layering means the process of distancing the placed money from its illegal origin.

The illegal origin of income is concealed by making several transfers and transactions involving different countries, different banks and different companies. The web of parallel and serial financial transactions, create it more complex to trace the origin. Offshore financial centers are very significant in doing more complicated transactions (Buchanan 2004, p.117). Speed electronic payment systems make such transactions easy. Inefficient cooperation of criminal prosecution and diverging jurisdiction of countries usually facilitates the layering process as well (Schneider & Windischbauer 2008, p.395).

2.3. Integration: Justification

As it has been mentioned earlier, third and last stage in the classic model was “integration”. At the integration stage, money has achieved the appearance of legitimacy and ready to invest in legitimate businesses. But Koningsveld (2013, p.442) shows it needs another stage to make them apparently legitimate money. This additional phase is called “justification” and in this stage money launderers try to make their ill-gotten money an apparent legal origin.

However, justification stage is not always necessary. In some cases, criminal money can be directly invested without the justification. For example, money launderers can buy real estate directly when it becomes possible with the legal systems of some foreign countries. They can do it safely since it is difficult for the authorities to trace the background owners of money (Koningsveld 2013, p.440).

Thus, money launderers arrange justification when there is a chance to be discovered. Gathering of evidence for a criminal investigation on ML basically depends on the business accounts of companies and financial institutions. Justification is, therefore, important for giving illegal money a legal origin on paper.

Loan-back and back-to-back loan are the most popular loan structures applied for ML. In loan-back transaction, money launderer creates multi deposits to place bulk of criminal money. These small accounts wire transfer to a foreign bank account which belongs to a company which has a good relationship with the launderer. Finally, foreign company sends back funds as loan to a domestic company owned by the criminal. This fund transfer will be appeared on the account books of criminal’s company as a loan. A back-to-back loan is a collateral loan transaction made by a foreign

bank or a lender to launderer's domestic account against the criminal's foreign assets acquired by using illegal money. Those collaterals can be foreign bank balance, sum of cash deposits or any other property owned by the launderer. In this case, lender is an independent third party.

The other method used in this stage is the sudden fabricated rise in net worth. There are several popular practices like, buying and selling of real estate and other items, fabricating casino winnings, lottery prizes and fabricated inherent properties. In some cases, business turnover or sales are manipulated by commingling illicit and legal sources of income.

Loan structures and TBML are, however, widely used at this stage. Misuse of trade for ML will be broadly discussed in the latter part of this paper.

2.4. Integration: Investment

After the justification, money has already achieved the appearance of legitimacy. Dirty money has been cleaned to be used for personal interest. In other words, it becomes the part of real financial system and ready to be used for any investment. Thereby, money launderers' illegal money can generate profits investing in legitimate businesses. Investment is the final stage of ML process and ultimate goal of money launderers.

3. Trade-based money laundering

TBML is one of the most popular techniques used in the stage of justification in the ML process. Accordingly, TBML can be defined as the process of disguising the proceeds of crime and moving value through the use of trade transactions in an attempt to legitimate their illicit origins (FATF 2006, p.2).

As it is highlighted in the FATF report on TBML (FATF 2006, p.2), international trade system is subject to wide range of risks and vulnerabilities that can be exploited by criminal organizations and terrorist financiers. Firstly, because of the complexities associated with the use of multiple trade transactions and diverse trade financing arrangements. Secondly, legitimate and illicit funds are combined together and it is not easy to discretely identify illicit funds. Finally, most of the customs agencies have limited resources and they are not sufficient to detect suspicious transactions.

When the anti money laundering regulations of financial system become strict, criminals shift to the international trade system and discover a new ways of laundering by using TBML. Pitt (1981 p. 449) demonstrates that legal trade is necessary for the abusers of the international trade to camouflage illegal trade. The greater the legal trade, the easier to swindle the enforcement authorities and it reduces the cost of smuggling. Ferwada et.al. (2013) also find the strong correlation between TBML and the trade flow. TBML is strictly proportional to licit trade. In other words, the volume of TBML increases with the expansion of global trade. Meanwhile, the growth of trade has exceeded the growth of GDP in many countries while it has increased faster in developing countries in recent decades. World Trade Report 2013 (WTO 2013) shows that in last three decades, world merchandise and commercial services trade have increased by about seven percent on average. In 2011, total world merchandise trade was USD 18 trillion and commercial service trade was USD 4 trillion. Moreover, calculations of Zdanowicz (2004) shows that both in flow and out flow of TBML in US is equal to the 1/5 of the total US trade. Thus, it implies that there are enough possibilities to TBML to acquire the higher pace and to obtain the massive volume in the global trade.

Launderers basically follow several techniques for TBML by misrepresenting the price, quantity or quality of exports/imports. Over- and under-invoicing is the most common and main technique they use. Some of the other methods are Multiple invoicing, Over- and under-shipment of goods and services and false description of goods and services (FATF 2006, p.4). In multiple invoicing, same good or service is invoiced more than once and different financial institutes are used for payments. Web of transactions create the complicated situation. For any case, money launderer

still has an opportunity to explain the situation on the basis of amendment of payment terms, correction to previous payment instruction or the payment of late fees.

Money Launderers can under state or over state the quantity of goods shipped by manipulating the export or import prices. In extreme cases, only the documents can be prepared without shipping any goods physically. Financial institutes unknowingly finance such fictitious transactions. They also can be benefitted by claiming export subsidies or rebates for these false transactions.

False description of goods and services is particularly useful technique for ML. Invoice price of goods strictly depends on the quality or type of the goods. Mentioning high quality or different goods in invoices and relevant documents, transaction can be done for a higher invoice values than the actual price. In this case, money can be moved out of the country. Conversely, by declaring the lower quality goods in the invoice, transaction can be made for high quality products to move the money into the country.

3.1. Trade misinvoicing

Misinvoicing of international trade transfers is the most common and one of the oldest techniques used in TBML. Apart from ML, price misrepresenting is also used to evade the tariff or taxes and it is considered as customs fraud. Trade misinvoicing occurs when the true value of exports or imports deviates from the declared amount of exports or imports to the authorities (Buehn & Eichler 2011, p.1263).

Types of misinvoicing of international trade have the mechanism to move the funds out or into the country. Money can be moved out of the country by under-priced exports or by over-priced imports. Meanwhile, over-priced exports or under-priced imports move money into the country. For example, let us consider the transaction of 1000pcs of single item actually valued at USD 2 each, exported from country A to country B. If price of each piece has been increased to USD 3 in invoices, additional USD 1000 can be transferred from country B to country A. Inversely, if each price has been decreased to USD 1, additional value of USD 1000 will be flowed from country A to country B. In addition to the fund-transferring, over-invoiced exports increase benefit of export subsidies and rebates while under-invoiced exports evade the export duties or income taxes. Further, by importing 1000pcs of that item for over-invoiced value at USD 3 each from country B to A, sum of USD 1000 can be moved out of the country A. If the import is done for under-invoiced value at USD1, extra USD 1000 can be moved into country A. Under-valuing of imports also can reduce import duty payments.

According to the FATF (2006, p.5) under-invoicing exports is the most common TBML method used to move money. Customs authorities mainly focus on the importation to stop contraband items and to collect due import duties and taxes. Hence, customs authorities pay less attention on exportations. It is important, however, to mention that there should be an agreement between importer and exporter to make the trade misinvoicing possible. Sometimes such transactions occur between parent company and the foreign affiliated company which are controlled by the same organization. In such a situation, organization can select the foreign location where such trading discrepancies might have less risk of being detected.

3.2. Quantifying the TBML

In the literature, very limited studies have tried to quantify the TBML. Among them, comprehensive study of Zdanowicz (2009) which analyzes US trade data to quantify the size of ML makes a remarkable contribution. He reviews several methodologies which have been used to analyze abnormal international trade pricing. Comparison of average country price with the world average price for every product is one of the oldest methods. This was basically criticized because this

methodology did not account for country or product heterogeneity. The price of the same product may be very different when it is imported from America and China.

Hence, it is important to employ methodologies which can recognize the country or product differences. In one method, over-invoiced prices are determined by accounting one country's all import/export transactions that are 50 percent above the average country import/export price of each commodity in each country. Similarly, under-invoiced price is determined by accounting one country's all import/export transactions that are 50 percent below the average country import or export price of each commodity in each country. By using this method, Zdanowicz (2009, p.862) calculates amount moved out of the US considering over-invoiced imports and under-invoiced exports transactions. USD 97.35bn, USD 116.18bn and USD 136.76bn were moved out of the US respectively in 1993, 1994 and 1995. This 50 percent deviation is criticized since use of 50 percent filter is arbitrary. This 50 percent filter might be too low or too high in some cases.

The other methodology is inter-quartile range price analysis. Over-invoiced prices are the prices included in upper quartile range of prices of each commodity imported (exported) from (to) the same country while under-invoiced prices are the prices included in lower quartile range of prices of each commodity imported (exported) from (to) the same country. It has been calculated that USD 167.76bn, USD 191.95bn and 189.05bn moved out of the US respectively in 2004, 2005 and 2006. Likewise, the amount of money moved into the US can be calculated considering under-invoiced imports and over-invoiced exports. Accordingly, the amount of USD 175bn flowed into the US by means of under-invoiced imports and the amount of USD 48bn flowed into the US by means of under-invoiced exports, in 2004. It has been found the net capital flow amounting USD 55.5bn moved into the US in 2004 (Zdanowicz 2009, p.864).

Gravity model is immensely employed in researches related to international trade. Ferwerda et al. (2013) adopt a gravity model to determine underline factors associated with TBML. One of the important findings is the TBML is highly related to the licit trade. Other variables, GDP of the importing country, distance between two countries and being a border country, also positively affect the ML while the implementation of AML policies make the negative impact.

3.3. Trade facilitation and TBML

Trade facilitation is basically defined as simplification and harmonizing of international trade procedures. Increase of trade volume and reduction of trade costs are main promising benefits gained by implementing trade facilitation measures. Wilson, Mann and Otsuki (2005) study on 75 countries to examine the relationship between trade facilitation and trade flow in manufactured goods. The results reveal that both imports and exports increased with the improvement of trade facilitation measures particularly the port efficiency, customs environment, regulatory environment, and service sector. Spencer and Karingi (2011) examine the impact of four trade facilitation indicators such as physical infrastructure, information and communications technology, border and transport efficiency and the business and regulatory environment on export competitiveness in Africa. They find clear evidence of increasing total factor productivity in African exports with the improvement in trade facilitation indicators.

Moise, Orliac and Minor (2011) find that four trade facilitation indicators: advance rulings, fees and charges, automation and procedures have the greatest impact on trade volume and costs. Particularly, simplification of procedures accounts for 5.4 percent of potential trade cost saving while automation accounts for 2.7 percent. Not only the trade volume, Engman (2005) exhibits facilitated cross-border movement of goods has the ability of a country to attract foreign direct investment and better integration in international production supply chains. He further emphasizes that improved and simplified customs procedures have a significant positive impact on trade flows.

Therefore, simplification of international trade procedures is a necessary factor for gaining more benefits from international trade. But several empirical studies evidence that simplification of

trade procedures would be merely misused by the criminals to launder their illicit proceeds or to finance terrorism. FATF provides with several examples for misusing simplified and liberalized trade procedures in Free Trade Zones (FTZs) for TBML since most of the businesses located in FTZs utilize international trade (FATF 2010, p.20).

Three decades ago, before the global discourse on trade facilitation, Pitt (1981) found the positive relationship between the volume of legal trade and smugglings because the costs of smuggling declined with the greater licit trade volume. This might happen due to the costs reducing trade facilitation policies flowed by the countries which have high volume of trade. One recent study of Ferwada et al. (2013) also finds TBML is strictly proportional to trade flows. This is partly because smugglers use licit trade to hide their illicit transactions but also partly because countries which operate high trade volumes usually follow trade facilitation measures to improve their trade and criminals also get the benefit of simplified procedures and low costs of transactions.

As it was indicated in above discussion, trade facilitation could benefit legal trade as well as the illicit trade. Hence, greater the implementation of trade facilitation measures, higher the risk of misusing trade for ML. It is necessary to take trade security measures or to put AML regulations into action while improving trade simplification indicators in order to prevent TBML. Accordingly, TBML gradually turns into an obstacle to trade facilitation.

3.4. Combating TBML

Majority of the countries use AML regulations to successfully combat money launderers. There exists sufficient legislative framework in many countries and ML is a separate criminal offence in the penal code (FATF 2009, p.12). However, many customs agencies, law enforcement agencies, financial intelligence units, tax authorities and banking supervisors are less capable of identifying and combating TBML when compared to their ability in dealing with other forms of ML and terrorist financing (FATF 2008, p.1).

There is an important study done by Boyrie, Pak and Zdanowicz (2005a) to identify impact of AML law on capital flow through abnormal pricing in international trade in Switzerland. They confine the analysis to trade between Switzerland and the US. ML act in Switzerland went into effect in 1998 and they analyze data from 1995 to 2000 to compare the effect before and after the AML law. Interestingly, they discover increased capital outflows during the period 1998-2000 after the enactment of the AML law. According to them, this happens because new law only covers the financial sector of the country. Trade sector has been totally disregarded. Smugglers, therefore, can move capital, either legally or illegally, to clean their illicit funds.

Ferwada et al. (2013, p.3178) observe very surprising result opposing the common expectation that countries combat ML, experience less TBML. Such countries show positive impact on TBML in the regression model. They suggest “Countries which have strict anti-money laundering regulation, experience more trade related ML. This may indicate that criminals have discovered a new way of laundering by using TBML to escape stricter AML regulation of the financial sector.”

It is, therefore, indicated that poor knowledge of relevant authorities on TBML is the initial problem in combating TBML. It seems necessary to educate members of authorities who are potentially able to combat trade related ML. Thus, it is essential to train the staff to identify new channels of ML through the international trade. Moreover, with the technical innovations novel techniques can be introduced to mislead the relevant agencies and knowledge sharing is very significant.

As it is highlighted by FATF (2006, p.25), sharing of knowledge and information among customs agencies, law enforcement agencies, financial intelligence units, tax authorities, and banking supervisors is frequently restricted to certain circumstances or undertaken on a voluntary rather than mandatory basis. Muhl (2013, p.452) also states that successful investigations rely heavily on the

ability of law enforcement agencies to get access to data in order to follow suspicious financial flows and to trace the proceeds of crime. Hence, it would be more important to establish the mechanism to exchange information, reports and data among such agencies. In addition, information and data must be shared with the foreign agencies since such information would broaden their understanding on TBML activities.

Analyses of trade data explicitly reveal more information on misuse of international trade. By introducing new statistical methodologies, Zdanowicz (2009, p.1) demonstrates how to evaluate country's international trade data base to identify illegal uses of trade so as to mitigate the risk associated with TBML. Ferwada et al. (2013, p.3177) also state "...the trade data are of great importance in explaining TBML." Hence, analysis of data would be the most useful tool to identify trade related ML. Since AML actions should not harm or obstruct the steps of trade facilitation, data analysis may provide with the most suitable technique.

Summary and concluding remarks

ML represents the considerable amount of the world economy, about 2-5 percent of the world GDP. Although the problem of combating ML attracted the attention of the world recently, at the end of 1980s, regulations and obligations of international organizations like FATF exhibit effective control of the financial sectors in many countries. Launderers always find new forms of ML (Unger & Hertog 2012, p.287) and TBML has been widely exploited for last few years.

Trade facilitation proceedings simplify and harmonize international trade thereby increasing trade volume and reducing costs. Simplified and liberalized trade practices in FTZs have been widely misused for ML. By surveying the literature, this study, therefore, examined the threats associated with trade facilitation that can be exploited by money launderers and tried to find suitable AML policies which cannot impede the expectations of trade facilitation.

TBML is significant at the justification stage of the ML process. Basic methodologies employed in TBML are, multiple invoicing, over- and under-shipment of goods and services, false description of goods and services, and misinvoicing. Criminals usually use licit trade to camouflage the illicit trade practices. There exists, therefore, a positive correlation between licit trade volume and illicit trade (Ferwada et al. 2013). Rapid expansion of global trade volume owing to the trade facilitation events undoubtedly increases the volume of TBML. Researchers employ several techniques to quantify in and out capital flows due to mis-invoicing of international trade and Zdanowicz (2009) calculates, capital outflow of the US was 7.34 percent of the total trade and capital inflow was 9.77 percent in 2004.

It was revealed that there exist some shortcomings pertaining to AML policies in fighting TBML. Basically, staff attached to the customs, tax authorities and law enforcing agencies have relatively low knowledge on TBML compared to their knowledge on other means of ML. Local and foreign authorities share data and information in voluntary basis and it should become mandatory. Since many customs agencies do not have access to trade data of other countries, they do not know "fair market" prices to identify over- or under-misinvoiced goods.

This study also disclosed there are developed mathematical tools to analyze data for detecting such exploitations of trade (FATF 2006, Zdanowicz 2009, Ferwada et al. 2013). Thus, the major recommendation is, to make use of such analytical tools by establishing a permanent unit to frequently analyze the trade data so as to detect illicit transactions. Because knowledge and information sharing have proven to reduce risk and vulnerability, there should be an effective mechanism among local and foreign authorities to distribute information in regular basis.

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