Anti-money laundering developments in Iran

Do Iranian banks have an integrated framework for money laundering deterrence?

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Abstract

Purpose – Money laundering has become a global concern in recent years, and many countries attempt to employ some preventive measures to cope with this phenomenon. Anti-money laundering (AML) controls vary in different countries, and consequently many studies, to date, have taken account of these differences along with the AML efforts. In this regard, financial institutions play an important role to tackle money laundering by involving in all three stages of money laundering (placement, layering and integration). The purpose of this paper is to investigate the AML situation of the Iranian banks and also study some related variables.

Design/methodology/approach – Using the Wolfsberg questionnaire, a survey consisting of 24 Iranian authorized banks in 2017 was conducted.

Findings – We conclude that Iranian banks have proper AML controls in place. Furthermore, it is concluded that banks with more staffs and more experienced employees are more likely to establish strong AML controls; conversely, banks with more branches are less likely to set up strong AML controls.

Originality/value – The present study is the first study conducted in Iran, and the outcomes of the study may be helpful to the Iranian and also International Banking System to establish stronger AML controls.

Keywords Anti-money laundering, Iranian banks, The Wolfsberg questionnaire

Paper type Research paper

Introduction

Looking up the Financial Action Task Force (FATF) website[1] reveals that the Iranian territory is a red flag zone in the geographical map. This means that the FATF considers Iran as a high-risk country for dealings and business transactions, particularly its corresponding banking system. On October 11th, 2007, the FATF reported that the Islamic Republic of Iran does not possess a comprehensive anti-money laundering (AML) regime, and this can be a significant vulnerability within the international financial system (FATF, 2007). However, following the adoption of an action plan to resolve anti-money laundering and counter-terrorism financing (AML/CTF) deficiencies and political commitment by Iran in June 2016, the FATF suspended its counter-measures for 12 months and called its members and other countries to advise their financial institutions to do their deals with Iranian private individuals and corporate entities with greater caution (FATF, 2017a).

Neighborhood with the first and sixth biggest producers of opium in the world (Afghanistan and Pakistan[2]) has turned Iran to a corridor for smuggling drugs from these countries to European destinations (Saghafi-Ameri, 2010). Therefore, it is expected that most narcotic-related crimes occur in Iran and the related criminals tend to launder their criminal proceeds through Iranian banking system. Accordingly, having AML/CTF rules and

regulations and forcing financial institutions to follow these rules or to have an integrated money laundering deterrence framework is of vital importance.

Despite the efforts made by the Iranian officials, including issuance of the Islamic Republic of Iran Anti-Money Laundering Law on January 22th, 2008, Regulations Concerning Prevention of Money Laundering through Financial Institutions, and Anti-Money Laundering Guidelines Issued for Credit Institutions, the FATF has yet emphasized the necessity of investigating and monitoring the Iranian Action Plan (FATF, 2017a). As academic and independent researchers, we attempt to fulfill this duty and report the development of AML areas in Iran in the present paper.

According to the article 33 of Anti-Money Laundering Implementation Regulations for Auditors issued in June 2012, auditors are required to give an opinion on their clients' compliance with the Islamic Republic of Iran Anti-Money Laundering Law and other related regulations. Accordingly, this has provided us, as an auditor and accountant, with an incentive to consider the recent changes and developments in AML/CTF rules and regulations.

In the present research, we attempt to empirically investigate to what extent the Iranian banks implement the Wolfsberg Group's AML criteria (The-Wolfsberg-Group, 2011) in their AML programs. In this respect, we use its standard questionnaire (The-Wolfsberg-Group, 2014) as a basis for evaluating Iranian banks promotions in AML areas. In this questionnaire, the existence of AML policies and procedures has been asked from financial institutions. Since American Accounting Association (AAA) defines auditing as a process of obtaining and evaluating evidence to ascertain the degree of correspondence between management assertions and established criteria (American Accounting Association, 1973), the existence of assertions for all kinds of auditing is necessary. Therefore, in this research, not only do we investigate Iran's AML conditions, but also we collect banks assertions about their policies, procedures and even their actions to avoid the money laundering. This provides an opportunity for future studies to investigate these assertions and determine the gap between them and reality.

The remainder of this paper is organized as follows. The section "literature review" presents some information about the definition of money laundering and its brief history, steps of money laundering and some of its methods, some related rules and regulations, Iran AML law and its related regulations, relationship of money laundering deterrence and accounting and auditing, research background of our study and, finally, developing the hypotheses. The section "research methodology" reports the experimental methods used to test the research hypotheses. The results of the study are presented in the next section. The last section discusses the implications and conclusions of our research.

Literature review
What is money laundering?
From the Association of Certified Anti-Money Laundering Specialists (CAMS) and also FATF point of view, money laundering is a process of concealing the origin of illegal and criminal proceeds and transforming them into legitimate assets (CAMS, 2012; OECD, 2009). Generally, money laundering begins with concealing criminal activities and continues with the legitimization of illegal funds and ends with the usage of that legitimized funds (Cox, 2014). Simply speaking, money laundering is the process of transforming illegal assets into legal assets (Schneider and Windischbauer, 2008).

The term "money laundering" stems from the American Mafia establishing laundries to legitimize their criminal proceeds in the 1930s (Schneider, 2008). Meyer Lansky, the gangster of the 1900s, was a famous man for concealing the source of his funds by purchasing real

estates and doing legal businesses. Al Capone was also a money launderer and a secondhand dealer who made it difficult for law enforcement agencies to trace the trail of his properties (Levi and Reuter, 2006; Unger *et al.*, 2006). However, money laundering can be traced back to 2000 years ago when the Chinese merchants concealed their money and properties from the rulers and even transferred them to out of China (Seagrave and Seagrave, 2010). Generally speaking, from the time of Adam and Eve, human beings concealed their sins or immoral activities. For instance, Adam and Eve used some leaves of Paradise to conceal the effect of tasting the forbidden fruit (Ali, 2011) or Cain buried his brother corpse to conceal the shame of fratricide (Ali, 2011; Tourage, 2016). Accordingly, one can conclude that money laundering first came into existence when money was invented.

Although money laundering has a long history, it was initially considered a crime during the war on drugs in the 1980s (Beare, 2003). Since the end of cold war and subsequent increase in the worldwide drug trafficking, corruption and organized crimes, there has been a tendency among criminals to launder their illegal proceeds (Fabre, 2003). Accordingly, the United Nations adopted a convention against Illicit Traffic in Narcotic and Psychotropic Substances in Vienna in 1988 (Cox, 2014), which is focused on the third recommendation of FATF as a measure of money laundering offenses (FATF, 2012).

How to launder the illegal money?
The process of money laundering is composed of Placement, Layering, and Integration stages in the most AML/CTF resources (Cox, 2014; IFAC, 2004; Schott, 2006). In the first stage, money launderers introduce their illegal funds to the financial systems. In this stage, they attempt to legitimize their dirty money by legal businesses including restaurants, laundry, clubs, etc. In the second stage, money launderers try to conceal the source of their funds in order to reduce the possibility of discovery. They do this action by transferring funds through different accounts in different countries. In the last stage, money launderers can use their "laundered or clean" money in order to purchase legal properties or finance other criminal activities (Coenen, 2009).

There are many ways through which criminals are able to launder their dirty money. These methods are heavily dependent on the creativity of criminals and can be categorized as follows: *Cash couriers*: money can be carried in suitcases across borders to countries or jurisdictions where the AML/CTF rules and regulations are poor; *Cash conversion*: this can be done by changing cash to banknotes. *Relatives and friends' bank account*: in this way money launderers transfer their criminal proceeds to an acquaintance's bank account. *Smurfing*: money launderers use multiple cash deposits to break up a transaction involving a large amount of money below the minimum reporting threshold. *Credit cards, wire transfers, and ATMs*: in these services, customers can have non-face-to-face transactions. *Foreign bank accounts*: some criminals use foreign bank accounts to conceal the source of their funds. *Shell companies and trusts*: money launderers conceal the true owner of their money by establishing some unreal firms. *Precious metals and gems*: most of the criminals exchange their proceeds for these precious items which are easily changed into cash. *Art and antiques*: there are no fixed prices for antiques and artworks and it is not clear how much money is paid or received by trading these items. *Extravagant lifestyles*: criminals usually have lavish lifestyles in which they spend money on luxury holidays, hotels, yachts, planes, and cars. *Loans*: criminals usually get loans by using the dirty funds as collateral and not repaying the loans. *Real states*: money launderers purchase real states with dirty funds and then sell them. *Stocks, bonds and other financial instruments*: in some real cases, money launderers use financial instruments in the layering stage of money laundering. *Over- and under-invoicing of goods*: the main purpose of this method is the falsification of

actual prices of goods and services to use these price gaps by importers and exporters. *Cash-intense businesses*: businesses like pizza shops, car washes and laundries are suitable enough to conceal the source of illegal funds. *Insurance*: in this method, criminals purchase certain insurance products like life insurance products and then cash them prematurely. *Non-profit organizations*: Since these organizations have a good publicity in societies, they are used as sites for laundering dirty money (Baker, 2005; Cox, 2014; Kennedy, 2005; Levi and Reuter, 2006; Quirk, 1997; Reuter, 2004; Sullivan, 2015b).

Some AML/CTF rules and regulations

The main international standard setters in the field of money laundering deterrence are The United Nations, The European Commission, The FATF on Money Laundering, The Basel Committee on Banking Supervision, International Association of Insurance Supervisors, International Organization of Securities Commissioners, The Egmont Group of Financial Intelligence Units and The Wolfsberg Group (Cox, 2014; Schott, 2006). Among these organizations and groups, the FATF has a crucial role in developing rules and recommendations required for financial institutions against money laundering (Alexander, 2001). The main topics of 40 FATF recommendations are presented as follows: the legal systems of countries and the scope of the criminal offense of money laundering, customer due diligence and beneficial ownership, reporting of suspicious activities and compliance, the measures to tackle money laundering and terrorist financing, monitoring and supervision, competent authorities and their powers and resources, transparency and the international cooperation (FATF, 2003).

According to the FATF recommendations, The Wolfsberg Group has released some principles about private banking to tackle money laundering and terrorist financing (Johnston and Carrington, 2006). The Wolfsberg Group questionnaire (2014) that is used as a fundamental source of this research consists of some questions about six categories of action that financial institutions are required to take: (1) questions about general AML policies, practices and procedures; (2) questions about risk assessment; (3) questions about customer due diligence and beneficial ownership; (4) questions about reportable transactions and prevention and detection of illegally funded transactions; (5) questions about transaction monitoring; and (6) questions about AML training.

The European Commission is another international body that introduces four money laundering directives to harmonize the AML actions across the Member States. These directives fully take into account the recommendations of FATF (Cox, 2014). Some main topics like risk-based approach, persistent monitoring, beneficial ownership, customer due diligence, politically exposed individuals, third parties and tax crimes are involved in these directives (Deloitte, 2016).

Another international standard setter is The Basel Committee on Banking Supervision whose main duty is to establish and promote global standards for banking[3]. In addition to efforts related to AML/CTF, this committee, in full support of FATF recommendations, has issued a paper which provides the best practice for managing risks related to money laundering and terrorist financing (Cox, 2014). Furthermore, other standards that the Basel committee has released are related to customer due diligence and beneficial ownership (Hopton, 2009), particularly in four broad areas: customer acceptance, customer identification, monitoring of high-risk accounts and risk management (IFAC, 2004).

In the Islamic Republic of Iran, the Anti-Money Laundering Law (2008) declares that all reporting institutions and relevant bodies are required to:

- establish intelligent information systems to receive, process and report information to tackle money laundering;

- use customer due diligence and beneficial ownership processes to identify customers, beneficial owners and their representatives;
- report suspicious transactions to relevant authorities;
- have a proper record keeping procedure; and
- establish internal control measures and train their staffs and managers to comply with AML rules and regulations.

Other Iranian regulations[4] such as AML Implementing Regulations (2011), Regulations on AML in E-banking and E-payments (2011), AML Regulations for Overseas Units of Credit Institutions (2011), Regulations on AML in Correspondent Relationships and the Identification of Shell Banks (2011) have been issued to implement the law and are totally compatible with the FATF recommendations.

The role of the accounting profession in combating money laundering
The accounting profession has different roles in societies, including providing relevant information for decision-making, rational allocation of resources, creating accountability and strategic advising. (Burchell *et al.*, 1980; Holtzman, 2004). Auditing, as a part of accounting profession, can also be a good control mechanism of the capital market economy (Soltani, 2007). Since stakeholders cannot rely on the information disclosed by companies, auditors as an independent party, add reliability and value to market information and society (Flint, 1988; Mautz and Sharaf, 1961). Therefore, accounting practitioners play an important role within the organizations and in maintaining the public interest (CCAB, 2015).

Accountants and auditors have a vital role in combating economic crimes, particularly money laundering (IFAC, 2004; Ringh and Sultani, 2014). They are also one of the main stakeholders in groups related to AML regulations (Rusmin and Brown, 2008). The expectations from accounting professionals are extended to the area where one may consider them as the first line of defense against money laundering (Aslani *et al.*, 2011; Standing and Van Vuuren, 2003). New auditing standards and regulations oblige auditors to take a proactive approach in combating money laundering and report suspicious transactions (Aslani *et al.*, 2011). In Iran, The Anti-Money Laundering Implementing Regulations for Auditors oblige auditors to review their client's AML compliance program and give an opinion on it in a separate paragraph in their reports. Therefore, it is necessary for auditors to be well trained in AML to meet regulators' expectations and also to devise controls to prevent the laundering of illicit proceeds (Abel and Gerson, 2001; Byrne, 2011).

There are some roles and responsibilities defined for the accounting profession in combating money laundering including (Abel and Gerson, 2001; ACCA, 2013; IFAC, 2004; Kayrak, 2008; Ringh and Sultani, 2014):

- monitoring and detecting money laundering involving the investigation of politically exposed persons, fraud and other financial crimes;
- establishing and strengthening controls and safeguards against money laundering;
- advising to compliance disclosures, auditing and reporting illegal activities;
- testing compliance monitoring programs and control environment;
- considering money laundering as an obstacle for going concern assumption;
- reviewing AML and suspicious transaction reporting programs to assist financial institutions to recognize regulatory requirements, meeting those requirements and identify significant weaknesses and deficiencies in their programs;

- helping the board or governance bodies to have a good AML policy, standards and guidance and also to implement those policies and procedures;
- considering the risk assessment process, risk profiling and benchmarking;
- monitoring training and awareness programs to test their consistency with AML program requirements;
- taking steps to identify clients and conduct customer due diligence by reference to independent and reliable resources;
- persistent monitoring of the business relationships;
- preventing corruption by enhancing accountability and transparency and also good governance in the financial management system;
- improving public awareness and introducing new techniques to prevent corruption; and
- following up suspicious transactions found within the scope of the audit.

Melnik (2000) points out four reasons why the accounting profession has been trusted with these responsibilities. First, accounting professionals do their jobs independently from their clients. In other words, they are not agents or advocates of their clients. Second, they have access to their clients' records and can monitor their daily operations. Third, the accounting profession is highly regulated. It is governed by accounting and auditing standards and also is monitored by certified public accountants. Fourth, the imposition of these responsibilities to accountants and auditors has a preventive impact on clients not to engage in money laundering. Furthermore, as discussed above, accounting professionals can be the best ones to detect mispricing cases as a method of money laundering. For instance, consider these import and export cases: "Pillowcases imported from France for 909.29 each? And SLR 35mm cameras export to Colombia for 7.44 each?" Therefore, the right persons to detect and investigate these strange prices are accountants and auditors who have access to their clients' financial records. They are also the best individuals to detect tax evasions as a type of fraud or financial crime (CIMA, 2009; De Boyrie, Pak, and Zdanowicz, 2005; Özkul and Pamukçu, 2012).

Although the accounting profession has a significant role in AML, only 5 per cent of suspicious activity reports are related to this act (CCAB, 2015). Financial Supervisory Authority statistics during 2012 show that out of 11,594 reports concerning potential money laundering activities, only five reports were from auditors (Ringh and Sultani, 2014). However, since there is a significant relationship between the accounting and audit quality and the level of perceived corruption in a country (Malagueño *et al.*, 2010), it is necessary for accounting professionals to be well-trained in AML fields.

Hypotheses development
Having a framework is the initial phase for conducting any plan, from a construction project to designing an anti-fraud program (Dawson, 2015). In this regard, some organizations and institutions like FATF, The World Bank and International Monetary Fund have attempted to provide a framework for financial institutions all over the world to combat money laundering and terrorism financing. FATF (2012) considers AML/CTF as a significant challenge and recommends an integrated framework to combat money laundering. In 2000, The Wolfsberg Group came together to develop a framework for managing financial crime risks and providing AML/CTF policies.

The interaction processes of accounting and criminal financing is closely dependent on the level of complexity of criminal activities. In this regard, De Maillard (1998) suggests that criminal activity is based on different levels of criminal capacity. This problem is explained with two functional and hierarchical aspects. The first aspect implies the hierarchical role of accounting in criminal financing in an organization. Criminal financing activities are analyzed based on three hierarchical levels including unorganized crime, organized crime and also organized crime networks. The first level "unorganized crime" is defined as a simple criminal activity in which isolated operations of traditional crimes related to associating and receiving of stolen goods without the need of capital accumulation are required. Therefore, the role of accounting knowledge is not significant at this level. The second level "organized crime" is dedicated to the cooperative activities of traditional violations in which a criminal gang organization is involved in corruption and theft. At this level, accountants and lawyers play an intermediating role to manage the incomes of business activities usually in nightclubs and casinos. The third level "organized crime networks" is referred to economic and financial crime in terms of bidding manipulation of public transactions, drug supplying and arms trade. In this stage, the accounting profession takes a determining role in managing the huge capital accumulation, derived, for example, from money laundering operations in offshore bank accounts.

The hierarchy aspect can be defined based on the degree of visibility. Thus, judicial authorities present three levels of money laundering: basic, elaborate and sophisticated. De Maillard (1998) suggests that the accounting profession takes a small part in basic money laundering "which aims to transform, by the shortest route, 'dirty money' into clean money". Conversely, at the elaborate level, legal and accounting knowledge is determining factor because investing criminal money in legal activities needs financial and judicial expertise. The final level of criminal organizations gets around the economy to launder the rapidly accumulated and substantial money and enter to the financial sphere. Money laundering activities require quick entries to the financial markets. At this level, criminal organizations employ financial and accounting expert bodies who are able to find out how to circumvent national regulations and technical norms.

The second aspect also intends to clarify the functional role of the accounting career in preventing criminal financing. A classification of illegal activities under this approach can be conducted by dividing them into three levels: totally illegal activities, illegal activities which are partly legal and legal activities which are partly illegal. It is necessary to specify the context in which the accounting knowledge is applicable.

The totally illegal activities such as acts of extorting, procuring prostitutes, drug dealing, armed robbery, smuggling and money counterfeiting require no accounting professional knowledge. Furthermore, when transforming illegal immigrant workers, accounting knowledge is necessary through the framework of fictitious and unreal invoicing operations to provide a shelter for legitimacy and conceal the illegal activities of companies. The next level, known as illegal activities which are partly legal, put the emphasis on criminal activities incorporating fraudulent misuse of public funds, kickbacks on public contracts, gaming slush funds and casino, false invoice networks, fiscal fraud and illegal activities in which accounting knowledge is necessary to help legitimize these operations. For risk minimization purposes, accounting knowledge is an obvious technical leverage. Since accountants use double entry system of bookkeeping, there would be a difficulty in distinguishing between real and fake transactions. Consequently, criminals launder their money by using legitimate commercial networks as a gate for illegal stations. The final level, known as legal activities which are partly illegal, suggests that the transactions of insider bodies and the exploitation of important organizational positions are extracted from

the classified accounting information of a financial entity. Nevertheless, the abuse or misuse of competitive advantage by insiders is more likely than the accounting information itself, primarily because influential figures in an organization provide such classified information. Putting dirty fund operations together, financing political bodies and balance sheet manipulation are dependent on the use of detailed accounting information; indeed, if the activity of political bodies and companies look legal, the illegal nature appearing in the financial sources will be removed either from fictitious commissions paid by middlemen or from other traditional money laundering activities. The company, itself, is not totally involved with the services of bankers, legal advisers, and accountants to create the required conditions for the legal use of the funds. One of the most important leverages for reassuring stakeholders is accounting manipulation, which is a prerequisite activity for any communication policy. As an overall conclusion, accounting knowledge provides strong support for covering up the criminal activity and is recognized as a risk minimization leverage as well.

In Middle East countries, money laundering is comparatively an unexplored issue from the perspective of empirical analysis. However, there is an existing path to discover new trends based on the experiences of countries in which AML frameworks are implemented in line with financial needs. This issue seems important from both point of views, i.e. the legislative and financial sector perspectives, in general, and securities markets, in particular. What follows is a succinct review of prior literature on this issue.

Al Agha (2007) investigates the concept of money laundering from the viewpoint of Islam; the criteria by which the Islamic law distinguishes between lawfulness (al-halal) and unlawfulness (al-haram); what the stipulations (conditions) are for having money or owning property in Islam; and what the attitude of Islamic law is towards the laundered money. In responding to the first question, he finds that although money laundering is a contemporary crime, the concept of money laundering has been addressed through many provisions in the Quran and Sunna (going back 1,400 years). Based on many examples cited in the Quran and Sunna, it has been recognized that the scale of prohibition in Islam is much wider than the scale of prohibition in any secular law. Qimar (gambling) is prohibited by Sharia law but not in secular laws. Vaithilingam and Nair (2007) examines the factors that underpin the pervasiveness of money laundering. An empirical method is used to study the relationship among technology (information and communication technology infrastructure), quality of human capital, the efficiency of the legal framework, ethical behavior of firms (corporate governance) and the capacity for innovation on the pervasiveness of money laundering in developed and developing countries. Based on the empirical findings, she suggests that an effective legal framework with good corporate governance lessens the pervasiveness of money laundering activities. The empirical analysis also showed that a high innovative capacity is negatively associated with the pervasiveness of money laundering activities. Shanmugam and Thanasegaran (2008) highlights the importance of countering the dangers posed by money laundering activities and the measures taken by the Malaysian authorities. In the case study, he finds that Malaysia should continue to make a broad and sustained effort to combat money laundering and terrorist financing flows within its borders. Jayasuriya (2009) articulates why money laundering is a matter of concern for stock market operations. He examines how AML efforts contribute to good governance and, conversely, how good governance measures aids in promoting AML. His study provides some evidence that good governance norms and practices can influence the further development and refinement of AML and terrorist financing regimes and their effective implementation. Likewise, compliance with AML and terrorist financing regimes can help us to create an environment conducive to the achievement of good governance norms and practices. Güneş

Okuyucu (2009) analyzes the AML legislation and its implementation under Turkish law. The steps taken to combat money laundering in Turkey and the importance of combating money laundering for Turkey are also analyzed in this research. Having examined the Turkish AML legislation and its implementation, the findings indicate that certain major steps have already been taken by Turkey as a candidate for the European Union accession and as a member of several international conventions against money laundering. Naheem (2016c) examines the role of internal audit function (IAF) in relation to AML compliance and oversight within global banking. The increasing globalization of banking functions and the mirrored globalization of financial crime require a renewed look at the role of internal audit. His study critically examines the weaknesses in the current structure and proposes a new way of thinking on IAF. The main findings of his research suggest that a new approach to internal audit is required that can operate effectively within a globalized banking and regulatory context, especially for AML compliance issues. The suggested approach is to develop regional audit committees and remove the internal stakeholder dilemma that is problematic to the IAF.

Many countries have developed their rules and regulations in accordance with FATF recommendations. Cox (2014) investigates the AML/CTF rules and regulations of 37 countries in his book and contends that there is a similarity in the regimes applied all over the world. Additionally, Sharman (2008) claims that over 170 countries have very similar AML policies. Likewise, Iran issued its Anti-Money Laundering Law (2008) and other related regulations (mostly issued in 2011) in accordance with FATF recommendations.

According to international standards and also Iranian rules and regulations, it is expected that all Iranian financial institutions, particularly those who are authorized by the Central Bank, have a framework to combat money laundering.

A large body of research has investigated several counties' developments and challenges in AML/CTF programs, laws and regulations. What follows is a review of these studies.

Viritha and Mariappan (2016) investigate the customer's awareness about AML practices in India. By sending the questionnaire to Indian bank customers, they found that the respondents' level of awareness about AML/CTF duties of banks, reporting function of banks, AML/CTF rules and regulations, the existence of Financial Intelligence Unit and its role is low. They also found that the customers are willing to present their identification documents to the bank but are reluctant to update their information. Furthermore, customers do not consent that banks disclose their information to the third parties including the Financial Intelligence Unit.

O'Sullivan (2016), in his case study of Hong Kong and Shanghai Banking Corporation (HSBC) in Mexico, concludes that the main AML failures across HSBC's subsidiaries are: (1) inadequate customer due diligence measures for risky customers; (2) failures of relationship managers to perform their AML responsibilities; (3) having a relationship with high-risk clients; (4) ineffective remedial plans; and (5) deficiencies in information system. In a similar vein, Naheem (2016a), (2016b) investigates the SBC in the US and suggests the other five areas of concern including bulk cash transfers, inaccurate country risk profiles, lack of adequate due diligence checks, bulk traveler's checks transfers and ignoring over 17,000 suspicious alerts.

Truby (2016) investigates Qatar's efforts to combat money laundering and terrorist financing and also compliance with the FATF recommendations. He also indicates that despite the slow pace of his country in updating international standards, it implements the latest AML/CTF standards. Kwok (2016) also investigates the AML developments in another developing country. He argues that new measures as suggested by FATF should be

implemented in Hong Kong. In another research, Dusabe (2016) investigates the state of money laundering in Rwanda (an African country) and indicates the poor situation of AML in this country and also non-membership in FATF.

Xue and Zhang (2016) explain three key indicators for risk assessment of customers in China: geographical factor, business factor and customer factor. The first factor refers to regions that are exposed to a higher money laundering risk. The second factor refers to possibilities of products and services to be used by money launderers, and the last one refers to customer due diligence; for example, politically exposed persons potentially have a higher risk than their counterparts.

Olaim and Rahman (2016) investigate the effect of Jordanian AML law on Jordanian banks. They concluded that the rate of money laundering crimes has been increased and also this law cannot increase the international cooperation in combating money laundering at the required level. Masciandaro and Filotto (2001) suggest two types of costs that AML regulations impose on banks and financial institutions: first, investment in human and physical capital to comply with related regulations and second, loss of customers because of reduction in confidentiality. They also argue that the AML regulations impose an additional cost on information users or society. Financial institutions may be compelled to forge AML requirements to cover these additional costs and fulfill their obligations. Magnusson (2009) argues that the benefit of preventive effects of AML regulations on criminality and terrorism does not outweigh its related costs and, consequently, other strategies should be considered.

Money laundering and globalization are related to each other and international cooperation and universal AML framework are required to encounter money laundering (Alldridge, 2008). Mitsilegas and Gilmore (2007) consider aligning of European Union AML/CTF framework with FATF standards as a recent challenge of EU. Although EU members are global initiatives to combat money laundering and terrorist financing and have made great efforts to achieve a high level of regulations so far, they actually are attempting to reach international standards like FATF standards. Therefore, it is necessary for other countries especially developing countries to conduct FATF recommendations in their AML/CTF frameworks.

Sproat (2007) highlights the massive investments made in AML regimes as another challenge facing governments. He declares that the AML regimes not only cannot achieve their objectives but also impose some costs on the financial sectors without these investments.

Despite these challenges and conflicts, Iran is determined to resolve its AML/CTF deficiencies and also to seek technical assistance in the implementation of the Action Plan (FATF, 2017b). Taken together, we present a set of hypotheses as follows:

   H1. All Iranian authorized financial institutions deploy an integrated AML framework.

   H1a. The gender diversity of financial institutions' AML officer has a positive impact on the efficient deployment of the AML framework.

   H1b. The educational level of financial institutions' AML officer has a positive impact on the efficient deployment of AML framework.

   H1c. The work experience of financial institutions' AML officer has a positive impact on the efficient deployment of AML framework.

   H2. Government ownership of financial institutions has a positive impact on the condition of the AML framework.

Research methodology

Data and sample selection

All Iranian banks which have the authorization from the Central Bank of Iran in 2017 are considered as the statistical population of this research. The list of authorized banks in 2017 which was available on the Central Bank website consists of 35 banks. We use questionnaire-interview method to collect research data. In this method, we physically give the questionnaire to AML officers and ask them to fill it on time and write the additional explanations. Only 24 out of 35 banks (around 68.6 per cent of the statistical population) agreed to fill the questionnaire. Therefore, the remaining sample consists of 24 authorized banks. Noteworthy that the questionnaires were answered by AML authorities of sample banks. Other necessary data, which were used to test the *H2*, were collected from banks' financial statements. It should be noted that financial statements of Iranian banks are available in Iran's Comprehensive Database of All Listed Companies (www.codal.ir) and also in their specific websites.

The questionnaire

The questionnaire consisted of 36 questions divided into two different sections. The first section contains demographic questions, such as gender, age, educational level, work experience, level of familiarity with Iranian AML rules and regulations, level of familiarity with FATF recommendations and finally level of familiarity with the Wolfsberg Group standards. These questions were asked to gain general knowledge about respondents and to control some respondents' attributes. The second section contains of The Wolfsberg Group questionnaire (2014) and an additional question of "does your financial institution have AML policies and programs?"

The Wolfsberg Group questionnaire consists of six sections. The first section is about "general AML policies, practices, and procedures" with nine questions. The second section is about "risk assessment" with two questions. The third section is about "beneficial ownership and customer due diligence" with six questions. The fourth section is about "reportable transactions and prevention and detection of transactions with illegally obtained funds" with five questions. The fifth section is about "transaction monitoring" with one question and finally, the last section is "AML training" with five questions.

Since the purpose of this research is to investigate whether or not the Iranian banks have AML policies or procedures, exactly the same as the Wolfsberg Group questionnaire, we use yes/no answers instead of other rating scales (i.e. Likert scale). For data processing purposes, the answer of yes takes the value of 1, and the value of 0 will be assigned to "no" answers. Sum of the scores will show the AML situation of banks. The information about measuring questionnaire variables is summarized in Table I. It is noteworthy that all required variables to test *H1* are extracted from the Wolfsberg questionnaire:

Research variables

Dependent variable. AML status of banks (AMLS): The Wolfsberg Group obliged banks to gather information and documents including corporate governance documents, the identification of board members and senior managers, annual reports and completed AML questionnaire to do an appropriate customer due diligence (Aiolfi and Bauer, 2012). Therefore, it is a good criterion to explain the AML status of a bank since Kutubi (2011) used this questionnaire to explain the AML status of Bangladeshi financial institutions. This questionnaire has become an industry standard for the establishment of any new correspondent banking relationship (Sullivan, 2015a). This variable is defined by the sum of scores obtained from Yes/No questions in the second section of research questionnaire

Item	How to measure
Gender	If the gender of respondents is male, it takes 1 and otherwise 0
Age	Equals to 1 if respondents are under 30 years old, equals to 2 if respondents are between 30 to 40, equals 3 if respondents are between 40 to 50 and it equals 4 if respondents are older than 50
Educational level	It equals 1 if respondents have a diploma, it equals 2 if respondents are associate, it equals 3 if respondents are a bachelor, it equals 4 if respondents have an MSc degree and it equals 5 if respondents have a Ph.D. degree
Work experience	It equals 1 if respondents have worked in banks for less than 5 years, it equals 2 for 5 to 10 work experience, it equals 3 for 10 to 15, it equals 4 for 15 to 20, it equals 5 for 20 to 25 and it equals to 6 for more than 25 years of work experience
Level of familiarity with Iranian AML rules and regulations	It equals 1 if respondents know nothing about Iranian AML rules and regulation, it equals 2 for weak knowledge, it equals 3 for average knowledge, it equals to 4 for good knowledge and if the respondents have a perfect knowledge, it equals 5
Level of familiarity with FATF recommendations	It equals 1 if respondents know nothing about FATF recommendations, it equals 2 for weak knowledge, it equals 3 for average knowledge, it equals to 4 for good knowledge and if the respondents have a perfect knowledge, it equals 5
Level of familiarity with the Wolfsberg Group standards	It equals 1 if respondents know nothing about the Wolfsberg Group standards, it equals 2 for weak knowledge, it equals 3 for average, it equals to 4 for good and if the respondents have a perfect knowledge, it equals 5
All other Yes/No questions	It equals 1 for yes answers and 0 for no answers

Table I.
Measuring of
questionnaire
answers

divided by the total number of questions which respondents have answered to have a homogeneous variable for all banks. Therefore, those banks getting score near to 1, have a better AML status than those with scores near to zero.

Independent and control variables Gender of respondents (GEN): it is 1 for men, otherwise, it takes the value of 0. On the one hand, sex differences is likely to influence the social behaviors and also conservatism (Feather, 1977). On the other hand, it may also influence the risk aversion of human beings (Borghans *et al.*, 2009). Therefore, we expect that sex differences could have an impact on the way respondents answer the questionnaires.

Age of respondents (AGE): it equals 1 if respondents are less than 30 years old, it equals 2 if respondents are between 30 and 40, it equals 3 if respondents are between 40 and 50 and finally it equals 4 if respondents are older than 50 years old. As people grow older and face some new responsibilities and problems, their behaviors may be changed (Feather, 1977). For instance, the risk tolerance of people may increase when they grow older (Wang and Hanna, 1997). Therefore, we expect that the age of respondents could have an impact on answering the questionnaires.

Respondents' level of education (EDU): it takes the value of 1 if respondents have a diploma, it takes 2 if respondents have an associate degree, it takes 3 if respondents have a bachelor, it takes 4 if respondents have master's degree and it takes 5 if respondents have a Ph.D. degree. Since The World Bank considers low levels of education as an indicator of corruption (Ksenia, 2008) and following prior studies such as Kolonel *et al.* (1977), we control for this variable.

Respondents' work experience (EXP): it equals 1 if respondents have worked less than 5 years in banks and financial institutions, it equals 2 if respondents have 5 to 10 years of work experience, it equals 3 if respondents have 10 to 15 years of work experience, it equals 4 if respondents have 15 to 20 years of work experience, it equals 5 if respondents have 20 to 25 years of work experience and finally it equals 6 if respondents have worked in banks and financial institution for more than 25 years. Since job experience has a substantial impact on job knowledge (Schmidt *et al.*, 1986), we expect that the less experienced respondents answer the questionnaires differently from their counterparts.

Respondents' familiarity with Iranian AML rules and regulations (FIRR): it takes the value of 1 if respondents have no knowledge of Iranian AML rules and regulations. If respondents have a weak, average and good knowledge, it takes the value of 2, 3 and 4, respectively. Finally, if respondents know everything about Iranian AML rules and regulation, it takes the value of 5. We consider this variable for two reasons: firstly, to test the effect of this knowledge on filling the questionnaires and, secondly, to describe the level of respondents' knowledge.

Respondents' familiarity with FATF recommendations (FFATF): the same as above, it takes the value of 1, 2, 3, 4 and 5, if respondents have no, weak, average, good and excellent knowledge about FATF recommendations, respectively. We expect that respondents with lack of knowledge about FATF recommendations cannot fill the questionnaires.

Respondents' familiarity with The Wolfsberg Group standards (FWGS): the same as above, it take the value of 1, 2, 3, 4 and 5, if respondents have no, weak, average, good and excellent knowledge about the Wolfsberg Group standards, respectively.

Government ownership (GOV): government-owned banks may have poor AML controls as compared with private banks for several reasons: (1) political influence on government-owned banks is significant (Dinç, 2005) in that some AML controls may be neglected by these banks for some political preferences; (2) government-owned banks have poor long-term performance, low levels of institutional quality and are less efficient than private banks (Andrianova *et al.*, 2008; Berger *et al.*, 2005), so that they may deviate from some regulations in order to compensate their poor performance; and (3) government ownership is associated with lower governance quality and also lower financial transparency (Borisova *et al.*, 2012; Bushman *et al.*, 2004). Since the government in Iran is powerful enough to influence organizations' decision-making, we use a dummy variable equals 1 if the government has any share in banks and 0, otherwise.

Majority shareholder (MSH): it is defined as a shareholder, either a person or entity, that owns more than 50 per cent of a company's outstanding shares. However, this measure is used differently in prior literature (Eng and Mak, 2003; Holderness and Sheehan, 1988; Jung and Kwon, 2002; Park and Shin, 2004). According to Article 1 on Instruction on Identification of Suspicious Transactions and Method of Reporting (2011), a majority shareholder is a person whose shares in a legal entity exceed 10 per cent. In this research, we defined majority shareholder as those who have 10 per cent or more of bank shares. Thus, if sample banks have shareholders owning 10 per cent or more of their shares, this variable takes the value of 1, and 0, otherwise. Since the ethical attitude of the major shareholders is likely to influence the ethical attitude of top managers of banks (Hortacsu and Ozkan Gunay, 2004), we expect that the existence of majority shareholder is likely to affect banks' AML status.

Return on equity (ROE): Doyle *et al.* (2007) argue that firms which disclose material weaknesses in internal controls are smaller, younger and less profitable. Accordingly, we expect that banks with lower ROE have weaker AML controls. ROE is defined as the ratio of net income to shareholders' equity.

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The number of bank employees (EMP): insufficient staff causes some weaknesses in internal controls (Doyle *et al.*, 2007). In other words, smaller banks might have weaker AML controls. This variable is defined as the natural logarithm of the number of employees which are disclosed in banks' financial statements.

Banking background (BACK): it equals the number of years since the establishment of the bank. Filatotchev *et al.* (2006) contend that corporate governance in different stages of the firm's life cycle is different. They also argue that young firms have lower resources and limited transparency and accountability, and, by contrast, mature firms have extensive resources and higher transparency and accountability. Therefore, we expect that older banks have better AML status.

Number of branches (BRANCH): number of branches can indicate the size of banks. Larger firms have greater voluntary disclosures and also better corporate governance (Eng and Mak, 2003). Thus, we expect that banks with more branches have better control environment and AML status. Furthermore, branching is likely to affect banks' market shares (Kim and Vale, 2001). Therefore, we expect that banks with more branches have high-quality controls to meet market expectations. This variable is defined as the total number of branches which are disclosed in banks' financial statements.

Liquidity (LIQ): dirty money is an important source of funds to sustain banks' liquidity during the financial crisis (Unger and Den Hertog, 2012). Moreover, it is expected that the management of banks creates better internal controls to ensure their liquidities (Olatunji, 2009). Therefore, we expect banks with higher liquidity have better AML controls and status. We use the ratio of total cash to total assets as a proxy for banks' liquidity.

Leverage (LEV): leverage is considered as a good proxy to measure firm's risk (Ben-Zion and Shalit, 1975; Hurdle, 1974). Furthermore, Goh and Li (2011) show that firms with material weaknesses in their internal controls are more leveraged than their counterparts. Accordingly, we expect a negative relationship between leverage and AML status of banks. Following prior studies such as Masli *et al.* (2010) and Harjoto *et al.* (2015), this variable is calculated as the ratio of total debts to total assets.

Findings
Descriptive statistics
Tables II and III report the results of descriptive statistics for questionnaires. The frequency of responses and the percentage of answers is summarized in Table II and the main statistics of responses are presented in Table III. Table II consists of two panels. Panel A contains descriptive statistics of demographic information of respondents (first section of the questionnaire) and panel B contains the information about AML status of sample financial institution (second section of the questionnaire).

For describing information in panel A of Table II, we consider six categories for each variable of gender, age, educational level, level of familiarity with Iranian AML rules and regulations, level of familiarity with FATF recommendations, and level of familiarity with the Wolfsberg Group standards. Category 1 is defined as male, under 30, diploma, less than 5 years and unfamiliar for each variable, respectively. Category 2 is defined as female, 30 to 40, associate, 5 to 10 years and bad for each variable, respectively. Category 3 is defined as 40 to 50, bachelor, 10 to 15 years and the average for the six remaining variables, respectively. Category 4 is defined as older than 50, master, 15 to 20 years and good for the six remaining variables, respectively. Category 5 is defined as doctoral, 20 to 25 years and excellent for the five remaining variables, respectively. Finally, Category 6 is defined as more than 25 years for the work experience variable.

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Panel A: Demographic information

	GEN Freq.	GEN (%)	AGE Freq.	AGE (%)	EDU Freq.	EDU (%)	EXP Freq.	EXP (%)	FIRR Freq.	FIRR (%)	FF ATF Freq.	FF ATF (%)	FWGS Freq.	FWGS (%)
Category 1	19	79.17	1	4.17			4	16.67	0	0.00	0	0.00	3	12.50
Category 2	5	20.83	14	58.33			7	29.16	0	0.00	1	4.17	1	4.17
Category 3			5	20.83	3	12.50	6	25.00	2	8.33	2	8.33	5	20.83
Category 4			4	16.67	18	75.00	5	20.83	9	37.50	12	50.00	8	33.34
Category 5					3	12.50	1	4.17	13	54.17	9	37.50	7	29.16
Category 6							1	4.17						

Panel B: AML status of banks

	AML 3P Freq.	AML 3P (%)	RA Freq.	RA (%)	KYC&CDD Freq.	KYC&CDD (%)	RT&PDT Freq.	RT&PDT (%)	TM Freq.	TM (%)	Training Freq.	Training (%)	Whole Freq.	Whole (%)
Banks with no positive answers	0	0.00	4	16.67	0	0.00	0	0.00	2	8.33	0	0.00	0	0.00
Banks with 0 to 25% positive answers	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Banks with 25 to 50% positive answers	0	0.00	0	0.00	2	8.33	0	0.00	0	0.00	1	4.17	1	4.17
Banks with 50 to 75% positive answers	4	16.67	6	25.00	6	25.00	4	16.67	0	0.00	1	4.17	2	8.33
Banks with 75 to 100% positive answers	9	37.50	0	0.00	2	8.33	5	20.83	0	0.00	4	16.66	14	58.34
Banks with 100% positive answers	11	45.83	14	58.33	14	58.34	15	62.50	22	91.67	18	75.00	7	29.16

Notes: GEN stands for the gender of respondents; AGE is the age of respondents; EDU is respondents' level of education; EXP is respondents' work experience; FIRR is respondents' familiarity with Iranian AML rules and regulations; FFATF is respondents' familiarity with FATF recommendations; FWGS is respondents' familiarity with The Wolfsberg Group standards; Since the applied questionnaire consists of six categories, to give a clear picture, we divided the results into six categories. Category 1 is defined as male, under 30, diploma, less than 5 years and unfamiliar for each variable, respectively. Category 2 is defined as female, 30 to 40, associate, 5 to 10 years and bad for each variable, respectively. Category 3 is defined as 40 to 50, bachelor, 10 to 15 years and the average for every six remaining variables, respectively. Category 4 is defined as older than 50, master, 15 to 20 years and good for every six remaining variables, respectively. Category 5 is defined as doctoral, 20 to 25 years and excellent for every five remaining variables, respectively. Finally, Category 6 is defined as more than 25 years for work experience variable; AML 3P is related to general AML policies, practices and procedures. RA is related to risk assessment. KYC&CDD is related to customer due diligence. RT&PDT is related to reportable transactions and prevention and detection of transactions with illegally obtained funds. TM is related to transaction monitoring. Training is related to AML training. The whole is related AML status of banks as a whole

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Variable	N	Mean	Median	Std.	Skewness	Kurtosis	Min	Max
AMLS	24	0.874	0.896	0.141	−1.373	4.695	0.444	1.000
GEN	24	1.208	1.000	0.415	1.436	3.063	1.000	2.000
AGE	24	2.500	2.000	0.834	0.689	2.484	1.000	4.000
EDU	24	4.000	4.000	0.511	0.000	4.000	3.000	5.000
EXP	24	2.792	3.000	1.318	0.508	2.771	1.000	6.000
FIRR	24	4.458	5.000	0.658	−0.780	2.556	3.000	5.000
FFATF	24	4.208	4.000	0.779	−0.933	3.893	2.000	5.000
FWGS	24	3.625	4.000	1.313	−0.808	2.680	1.000	5.000

Notes: AMLS is the anti-money laundering status of sample bank. GEN is the gender of respondents. AGE is the age of respondents. EDU is respondents' educational degree. EXP is respondents' work experience. FIRR is respondents' familiarity with Iranian AML rules and regulations. FFATF is respondents' familiarity with FATF recommendations. FWGS is respondents' familiarity with the Wolfsberg Group standards. See Section 3.3 for variables definitions and more information

Table III.
Sample statistics

Panel B of Table II presents the status of six areas of an AML program including (1) AML policies and procedures; (2) Risk assessment; (3) Customer due diligence; (4) Prevention and detection of reportable transactions; (5) Transaction monitoring; and (6) AML training, for the whole sample.

As it is evident in panel A of Table II, about 80 per cent of respondents are men and most of them (58.33 per cent) aged from 30 to 40 years old. In all, 75 per cent of respondents have master's degree and there is not any bachelor's degree holder or lower. Respondents' work experience ranges between 5 to 20 years and most frequently between 10 to 15 years (29.16 per cent). Most of the respondents are excellent and good in Iranian AML rules and regulations (91.67 per cent), FATF recommendations (87.50 per cent) and Wolfsberg Group standards (62.50 per cent).

Panel B of Table II also shows that, in general, most of the Iranian banks have good status regarding money laundering. Because about 29 per cent of sample banks comply with Wolfsberg standards and 87.50 per cent of them are rated as good in more than 75 per cent of the questions. In the AML policies, practices and procedures context, all sample banks give more than 50 per cent positive answers and this suggests that Iranian banks are developing in this area. In all, 58.33 per cent of sample banks are perfect for risk assessments but actually, 16.67 per cent of them are significantly weak. Finally, most of the sample banks are perfect in customer due diligence, reporting transactions and preventing and detecting of suspicious transactions, transaction monitoring and AML training with the percentages of 58.34 per cent, 62.50 per cent, 91.67 per cent, and 75 per cent, respectively.

Table III indicates that the sample includes 24 observations that the mean and median of AMLS are 0.874 and 0.896, respectively. Since these numbers are near to 1, we can conclude that sample banks have good AML structures. Mean and median of the last variables shows that AML authorities of sample banks have sufficient knowledge to combat money laundering.

Correlation among variables
Table IV presents the correlation matrix regarding the AML status of sample banks and other independent variables. The correlation between AML situation of sample banks and respondents' work experience is significantly positive. There is no correlation between respondents' gender and the other variables. Obviously, there is a significantly positive correlation between the age of respondents and their work experience. There are

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significantly positive correlations among three variables related to respondents' AML knowledge, suggesting that respondents who have knowledge in the Iranian AML rules and regulations are familiar with the FATF recommendations and Wolfsberg Group standards as well.

Empirical results of examining H1

Table V reports the results of the research hypothesis and dependency of banks' AML status. The results of *H1* testing are presented in panel A of the Table V and the results of its subsets hypotheses are presented in Panel B.

Panel A of Table V shows that at the significance level of 0.05, the mean of banks' AML status is more than 0.95, suggesting that Iranian banks deploy an integrated framework to combat money laundering activities. The findings reported in Panel B of Table V also shows that only work experience of AML officers is positively associated with the AML status of financial institutions with a *p*-value of 0.049. This finding implies that incremental work experience in the position of AML will result in the improvement of AML status of the sample banks.

Other weaknesses in Iranian AML structures that respondents have mentioned are:

• lack of an integrated and comprehensive database to categorize customers;

• lack of AML directives to interpret AML rules and regulations;

Variables	AMLS	GEN	AGE	EDU	EXP	FIRR	FFATF	FWGS
AMLS	1							
GEN	0.081	1						
AGE	0.283	−0.314	1					
EDU	−0.129	0.000	0.000	1				
EXP	0.592*	0.003	0.692*	0.000	1			
FIRR	0.101	−0.046	0.040	0.129	0.215	1		
FFATF	0.306	−0.006	−0.033	0.218	0.256	0.823*	1	
FWGS	0.361	0.070	0.377	−0.065	0.556*	0.610*	0.632*	1

Note: *Indicates significant at 5% or less

Table IV.
Correlation
coefficients

Panel A: Results of H1				
H_0: $\mu_{AMLS} \leq 0.95$	*t* statistic	−2.620	Prob.	0.015*
Panel B: Results of H1's subsets				
Variables	Coefficient	Std. Error	*t* statistic	Prob.
Intercept	0.923	0.296	3.119	0.007**
GEN	0.018	0.071	0.052	0.805
AGE	−0.009	0.053	−0.166	0.870
EDU	−0.060	0.054	−1.116	0.281
EXP	0.067	0.031	2.126	0.049*
FIRR	−0.099	0.070	−1.430	0.172
FFATF	0.116	0.068	1.718	0.105
FWGS	−0.011	0.033	−0.341	0.738
F statistic	2.257	R^2	0.497	
p value	0.084	Adjusted R^2	0.277	

Notes: *Significant at 5%; **significant at 1%

Table V.
Empirical results of
H1

- lack of comprehensive AML systems and software packages to help banks to detect suspicious transactions;
- lack of clear definitions of politically exposed persons and their features to distinguish them from other persons;
- global political opposition to Iran that causes Iranian AML efforts to be in vain;
- lack of clear AML guidance on providing electronic services such as e-payments; and
- lack of AML guidance on correcting and updating customers' information.

Empirical results of examining H2
In this section, we analyze the relationship between AML status of banks and some other variables from the latest available financial statements of sample banks. Out of 24 sample banks, financial statements of 19 banks are only available. Results of the second hypothesis are presented in Table VI.

According to the results shown in Table VI, there is a significant relationship between AML status of sample banks and the number of banks' employees (0.041). Consistent with our primary expectation, banks with more employees establish stronger internal controls which will result in AML improvement. The results also suggest a negative relationship between AML situation of sample banks and the number of banks' branches (0.082). In addition, banks with more branches across the country have more ability to set up better AML controls because more extended activities cause more difficulties to control related aspects. In this context, Williamson (1967) suggests that firm size may cause control-loss. Therefore, larger banks may counter with control difficulties. Finally, it is noteworthy that all governmental banks (banks totally owned by the government) rejected to answer research questionnaires and this can indicate lack of transparency in Iranian governmental banks.

Conclusion
Iran is located in The Golden Crescent which is the most important opium-producing canters in the world (Sen, 1992). Although opium production is forbidden based on the Law of Anti-

Variables	Expected signs	Coefficient	Std. Error	t statistic	Prob.
Intercept		0.331	0.184	1.798	0.102
GOV	−	0.046	0.180	0.255	0.804
MSH	?	0.051	0.108	0.470	0.648
ROE	+	0.335	0.251	1.334	0.212
EMP	+	0.067	0.029	2.348	0.041**
BACK	+	0.008	0.007	1.099	0.297
BRANCH	−	−0.000	0.000	−1.935	0.082*
LIQ	+	−0.529	0.854	−0.620	0.549
LEV	−	−0.143	0.097	−1.475	0.171
	F statistic	2.731	R^2	0.686	
	p value	0.070	Adjusted R^2	0.435	

Table VI.
Empirical results of *H2*

Notes: GOV is government ownership in sample banks. MSH is the shareholders who own 10% or more of banks' shares. ROE is the return on equity. EMP is the number of banks' employees. BACK is the number of years since the establishment of the sample banks. BRANCH is the number of banks' branches. LIQ is the ratio of total cash to total assets. LEV is the ratio of total debts to total assets; *significant at 10%; **significant at 5%

Drug in 1912 against opium use and its cultivation and also Anti-Narcotics Law in 1997 (Bouhou, 2011), neighborhood with Afghanistan, the first opium producer in the world, makes Iran as a transit road to distribute opium all over the world. Therefore, a high level of drug trafficking and money laundering is expected in Iran. In this regard, Iran with the death toll of 4,000 law enforcement officers and 12,000 injuries demonstrated great efforts to combat drug trafficking. Although there are some deficiencies in dealing with money laundering, Iran has made great efforts recently. Therefore, in this research, we investigate these efforts in the banking context.

The main findings of this paper show that Iranian banks established a proper framework and structures to combat money laundering. Furthermore, we also find that banks with experienced AML officers are more successful in performing their AML duties in society. Moreover, considering information disclosed in financial statements of sample banks, it is arguable that banks with more staffs are more likely to establish strong AML controls, and, conversely, banks with more branches are less likely to set up strong AML controls.

Our findings provide useful implications for International authorities and investors that Iranian banks are properly benefited from AML controls which could result in the wealth assurance. Moreover, the findings are applicable for Iranian Central Bank, as a policymaker, to determine the threshold for the number of bank branches and employees, which leads to stronger AML controls.

Since we have gathered banks' claims about AML controls in the present paper, it is recommended to investigate these claims from an independent source such as external auditors who are independent and familiar with banks' internal controls and also control environment.

Notes

1. Available at: www.fatf-gafi.org/countries/#high-risk

2. According to the world atlas at: www.worldatlas.com/articles/top-opium-poppy-producing-countries.html

3. Available at: www.bis.org/bcbs/about.htm

4. All Iranian AML rules and regulations are accessible in the Central Bank of Islamic Republic of Iran website (in Persian): www.cbi.ir/default_en.aspx

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