Executive Summary

This study is the final report of project IARM (www.transcrime.it/iarm). IARM is co-funded by the Prevention of and Fight against Crime Programme of the European Union and it has been carried out by an international consortium coordinated by Transcrime – Università Cattolica del Sacro Cuore (Italy). Other research partners are:

- the Vrije Universiteit Amsterdam (the Netherlands)
- the University of Leicester (United Kingdom)

Research partners have contributed to IARM by carrying out the analysis and by writing this report.

Associate partners are:

- the Italian Ministry for the Economy and Finance (Italy)
- UIF – the Italian Financial Intelligence Unit, within the Bank of Italy (Italy)
- the Dutch Ministry of Finance (the Netherlands)
- the Dutch Ministry of Security and Justice (the Netherlands)
- the NPCC – National Police Chiefs’ Council (United Kingdom)

Associate partners have contributed to IARM by providing valuable inputs, discussion and feedback but cannot be held responsible for what is written in this report.

Bureau van Dijk provided support as data provider.

Objectives and methodology

Project IARM develops an exploratory methodology for assessing the risk of money laundering (ML). In particular, it develops a composite indicator of money laundering risk:

- at geographic area level
- at business sector level

The methodology is tested in three pilot countries (Italy, the Netherlands and the United Kingdom) and follows 7 methodological steps, which include:

- identifying ML risk factors across areas and sectors;
- operationalising risk factors into a set of proxy variables to allow measurement;
- combining the variables, through various statistical techniques, into a final indicator of ML risk;
- validating the indicator through a sensitivity analysis and comparison with other measures of ML.

IARM adopts a quantitative approach which complements the qualitative perspective of most existing national and supranational ML risk assessments (NRA and SNRA).

It responds to the need, stressed by regulatory developments at both EU and national level, to develop objective and robust methodologies for ML risk assessment.

Risk factors

In each of the three pilot countries, a country-specific set of risk factors is identified on the basis of:

- the relevant international and national literature (e.g. FATF guidelines, FIU reports, judiciary evidence, academic literature);
- interviews with experts (e.g. FIU officers, investigators, policy-makers, private sector);
- data availability: because it is not possible to find the same data and variables in all the three countries.

Risk factors are distinguished between ML threats and vulnerabilities, as suggested by FATF and as depicted in Figures 1 and 2.
Figure E1 – ML risk factors analysed at sub-national area level (Italy and UK)

- Threats
  - Organised crime infiltration
  - Illicit markets
  - Tax evasion and underground economy

- Vulnerabilities
  - Cash/intensiveness
  - Opacity of business ownership
  - High use of money transfers
  - Attractiveness of real estate market
  - Presence of transit hubs

- ML Risk

Analysed in:
- Italy
- UK

Figure E2 – ML risk factors analysed at business sector level (Italy and the Netherlands)

- Threats
  - Organised crime infiltration
  - Tax evasion and underground economy

- Vulnerabilities
  - Cash/intensiveness
  - Opacity of business ownership
  - Business profitability
  - Complexity of business ownership structure
  - Ownership links with risky jurisdictions

Analysed in:
- Italy
- the Netherlands
In Italy IARM assesses the ML risk across the **110 provinces and 77 economic sectors** (NACE divisions).

The analysis provides empirical support for the main findings of the **2014 National Risk Assessment** and of the **2016 FATF Mutual Evaluation Report**. It complements the NRA qualitative approach with a data-driven one, and supplements a regional analysis, while the NRA adopts only a national perspective.

**ML risk across provinces**

The provinces with the highest ML risk (Figure 3) are in the south, with four Calabrian provinces ranking at the top (Reggio Calabria, Vibo Valentia, Catanzaro, Crotone). They record high levels of mafia-type infiltration, cash-intensiveness and underground economy.

In other southern regions, also Napoli, Caserta, Palermo and Trapani show high ML risk. Among non-southern regions, Imperia and Prato rank highest, showing relatively high levels of opacity of business ownership, of underground and cash-intensive economy and of money transfers.

At province level, ML risk is significantly **correlated with the rate of suspicious transaction reports (STRs)** – although some provinces seem to “under-report” with respect to their estimated level of risk.

**Figure E3 - ML risk across Italian provinces**

Source: Transcrime - UCSC elaboration
ML risk across business sectors

At business sector level, analysis is made difficult by the paucity of data and of appropriate proxies. Therefore, only some exploratory analysis is carried out.

According to the composite indicator (Table 1), the economic sector with highest estimated ML risk in Italy are bars and restaurants (NACE division I 56). They are characterised by high cash-intensiveness, irregular labour, opacity of business ownership and relatively high levels of organised crime infiltration.

They are followed by other service activities (NACE section S), which include a variety of businesses, from repair services, to personal service activities - like massage parlours, beauty centres and spas - but also security and investigation companies and fiduciary services.

Several segments of the construction supply-chain, from sand extraction, to cement production, to building companies and relevant professional activities (e.g. engineering and architecture firms) rank among the first 20 most risky sectors, confirming the link between the construction industry, the underground economy and mafias’ business cycle.

The high value of travel agencies and tour operators (N 79) is explained by the high cash-intensiveness and the close relationship with the tourism industry, which has proven to be vulnerable to criminal infiltration and money laundering activities.

Table E1 - ML risk across business sectors in Italy

<table>
<thead>
<tr>
<th>Business sector (NACE division)</th>
<th>ML RISK COMPOSITE INDICATOR SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I 56. Food and beverage service activities</td>
<td>100.0</td>
</tr>
<tr>
<td>S 95. Repair of computers and personal and household goods</td>
<td>80.4</td>
</tr>
<tr>
<td>S 96. Other personal service activities</td>
<td>67.3</td>
</tr>
<tr>
<td>N 79. Travel agency tour operator reservation service and related activities</td>
<td>64.4</td>
</tr>
<tr>
<td>R 92. Gambling and betting activities</td>
<td>63.5</td>
</tr>
<tr>
<td>R 90. Creative arts and entertainment activities</td>
<td>62.1</td>
</tr>
<tr>
<td>P 85. Education</td>
<td>61.6</td>
</tr>
<tr>
<td>A 03. Fishing and aquaculture</td>
<td>61.0</td>
</tr>
<tr>
<td>M 74. Other professional scientific and technical activities</td>
<td>60.4</td>
</tr>
<tr>
<td>C 19. Manufacture of coke and refined petroleum products</td>
<td>59.1</td>
</tr>
</tbody>
</table>

Source: Transcrime - UCSC elaboration
The Netherlands

In the Netherlands IARM assesses the ML risk across 83 economic sectors (NACE divisions).

According to the composite indicator, the business sector with highest ML risk is casinos, gambling and gaming businesses (R 92). Despite being under AML obligations, it shows evidence of OC infiltration, of ‘cooking the books’ activities and a high cash intensity and opacity of beneficial ownership. Also R 93 – which in the Netherlands includes legal prostitution services – and R 90 – which is related to art and entertainment activities – are in the top 10 sectors (see Table 2).

Also hotels (I 55) and bars and restaurants (I 56) rank highly. These sectors show high levels of OC infiltration, confirming their vulnerability to ML activities as suggested by the literature. Security and investigation services (N 80) also rank high, confirming evidence from the Dutch Police regarding involvement of organised crime in this business sector.

The analysis may provide inputs to the on-going Dutch NRA (2017), supplementing its qualitative approach with a purely quantitative perspective. It could be used at both policy-making and investigative level, for example to better detect the economic activities to be placed under the BIBOB screening (an administrative measure to prevent OC infiltration).

However, the analysis should be further enhanced by improving the quality and availability of data, and by exploring further indicators and measurement approaches.

Table E2 – ML risk across business sectors in the Netherlands
Top 10 NACE divisions according to ML risk composite indicator

<table>
<thead>
<tr>
<th>Business sector (NACE division)</th>
<th>ML RISK COMPOSITE INDICATOR SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>R 92. Gambling and betting activities</td>
<td>100.0</td>
</tr>
<tr>
<td>I 55. Accommodation</td>
<td>97.9</td>
</tr>
<tr>
<td>R 90. Creative, arts and entertainment activities</td>
<td>72.9</td>
</tr>
<tr>
<td>N 80. Security and investigation activities</td>
<td>69.8</td>
</tr>
<tr>
<td>S 95. Repair of computers and personal and household goods</td>
<td>54.4</td>
</tr>
<tr>
<td>N 79. Travel agency, tour operator reservation service and related activities</td>
<td>54.1</td>
</tr>
<tr>
<td>S 96. Other personal service activities</td>
<td>48.7</td>
</tr>
<tr>
<td>O 84. Public administration and defence; compulsory social security</td>
<td>46.6</td>
</tr>
<tr>
<td>R 93. Sports activities and amusement and recreation activities</td>
<td>44.0</td>
</tr>
<tr>
<td>I 56. Food and beverage service activities</td>
<td>43.8</td>
</tr>
</tbody>
</table>

Source: VU Amsterdam elaboration
In the United Kingdom, IARM has assessed ML risk across the 43 police areas in England & Wales. It was not possible, due to lack of workable data, to extend the analysis to Scotland and Northern Ireland. The paucity of data in relation to UK threats and vulnerabilities remains a significant issue, especially when trying to assess ML risk at business sector level.

The United Kingdom is at obvious risk from money laundering due to its position as a major world financial centre. This leads to a number of companies – especially in the City of London – with connections to risky jurisdictions.

Among the three IARM countries, UK shows the highest complexity of corporate structures, with an average distance to beneficial owners\(^1\) of 1.6 – which becomes 3.7 and 3.4 in the Channel Islands and Isle of Man respectively.

A number of other ML threats and vulnerabilities could also be identified across UK areas – such as the number of organised crime groups operating, the volume of predicate offences and cash-intensiveness of businesses.

According to IARM analysis, the City of London emerges as the area with the highest ML risk – representing an outlier in most of the considered variables. Conurbations such as the Metropolitan Police area, Greater Manchester and the West Midlands also emerge as high risk areas. These locations appear to be most exposed to serious and organised crime, to businesses’ connections with risky jurisdictions and with the highest cash-intensiveness.

Although the approach outlined here is a pilot, it could be used to complement the 2015 UK ML NRA and to support future National Risk Assessments. The risk-factors approach adopted by IARM could lead to a more transparent methodology to be developed to measure territorial and business level risks.

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1. BOs in the BvD definition are the individual(s) who ultimately own or control a company or other legal entity. BvD identifies them by reconstructing the ownership chain until finding natural persons holding above a certain shareholding. For the purpose of this study, it has been decided to set the minimum threshold at 10% of the shareholding at the first level of the company ownership chain and 10% at further levels. The threshold adopted is lower than that indicated by the current EU Directive’s definition (25% threshold) but allows for a more comprehensive analysis. When BO distance equals 1, the company is directly controlled by its BO(s) (see Annex for details).
Thanks to the use of an innovative set of data and proxies, IARM also carries out the first in-depth analysis of the degree of opacity of business ownership in Italy, the Netherlands and the UK.

Italian companies exhibit more direct control patterns: BO distance is lower than in the Netherlands and the UK (respectively 1.3, 1.7 and 1.6) and also the volume of connections with risky jurisdictions (such as off-shore countries) is more limited. However, figures vary greatly across areas and economic activities.

Business sectors like mining (NACE section B), energy (D), water and waste (E) and finance (K) are characterised by higher complexity and opacity in all the three countries, but also by a higher number of multinational companies.

After controlling by company size, hotels, bars and restaurants (section I), entertainment & gaming (R) and other services (S) emerge promptly. In the UK, real estate businesses (L) also rank high, highlighting the risk of a link between the UK property market and companies/individuals from opaque jurisdictions.

Some other statistics would deserve further research – for example the high number of shareholders (especially legal persons) from Luxembourg, Cyprus and Switzerland and of beneficial owners from Spain (in all the three countries, but especially in some southern Italian areas and sectors like R 92 - gambling & betting).
IARM added value

The IARM methodology builds on FATF guidelines. It does not intend to replace the qualitative approach of current ML national and supranational risk assessments (NRA and SNRA) but to complement it with a quantitative and data-driven perspective. With respect to existing risk assessment, IARM offers:

- a higher disaggregation detail (e.g. a regional perspective vs the national perspective of most NRAs);
- coverage of all business sectors (while NRA usually do not adopt a sectorial perspective);
- an innovative analysis of business ownership opacity;
- a synthetic measure of a complex phenomenon such as ML risk.

The indicators of ML risk developed by IARM could be adopted in the operational domain by both public agencies and private entities, for example:

- by policy-makers, to support a better allocation of AML resources and measures across the areas and sectors based on their risk level;
- by investigative agencies (e.g. LEAs and FIUs), to identify the areas and sectors on which to strengthen monitoring and investigations;
- by obliged entities (e.g. banks, professionals, etc.), to enrich the set of indicators and red-flags to be used in AML customer due diligence.

Research and policy implications

Future challenges

IARM is only a first step towards a systematic assessment of ML risks across areas and businesses. It follows an exploratory methodology which is affected by data availability – it works better in contexts characterised by richer set of information, while it will underestimate those risk factors for which data are still lacking (like emerging ML risks which by definition lack estimates).

In order to improve this approach, data quantity and quality should be enhanced. In particular:

- at business sector level;
- on important ML threats such as tax crimes and fraud;
- on important ML vulnerabilities such as cash use, for which statistics are available in most EU countries only at the national level;
- on the ownership structure of European businesses;
- on suspicious transaction reports/suspicious activity reports (STRs/SARs) which could be rich sources of information but are only partially exploited for research purposes.

The IARM data-driven methodology should be combined with the qualitative approach of other NRAs in order to obtain a comprehensive understanding of ML risks. It should be replicated in other countries, both in Europe and abroad, to test its validity and refine the methodology. Moreover, it should take into consideration other factors (e.g. vulnerabilities in AML regulation).

The benefits would go much beyond the AML field, reinforcing also the fight against terrorist financing, tax evasion and corruption and improving the efficiency and security of the EU internal market.