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MODELS OF CLASSES FOR ECONOMIC OBJECTS IN APPLICATIONS

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Abstract: *The paper presents the models of classes for economic objects in applications. In most cases, the economic objects have an abstract definition and so the optimal ways to describe these are interfaces used by economic applications. The information system is an information system that allows the performance of operations of collection, transmission, storage, data processing and dissemination of information thus obtained through the use of information technology and staff specialized in automatic data processing. The computer system includes all internal and external information, formal or informal used within the company as well as the data on which they were obtained, the software necessary for data processing and dissemination of information within the organization, procedures and techniques for obtaining (based on primary data) and disseminating information, the hardware platform necessary for data processing and information dissipation and staff specialized in data collection, transmission, storage and processing. The interfaces provided for classes can be extended according with the business requirements and may be changed easily for different types of activities.*

Keywords: *interfaces, implemented classes, economical modules, informational support, business flows, application modules, extended classes*
JEL classification: *C23, C26, C38, C55, C81, C87*

1. Introduction

The computer system is structured so as to meet the requirements of different groups of users such as: management factors at the level of strategic, tactical and operative management, staff involved in the process of data collection and processing and staff involved in the process of scientific research and design of new products and manufacturing technologies. Along with the definition of the business strategy, it is necessary to define the strategy of the information system and this because: the IT system supports the managers, through the information provided, in the management and control activity in order to achieve the strategic objectives of the organization, IT systems are open and flexible, constantly adapting to the imposed requirements the dynamic environment in which the company operates, promoting IT solutions supports the organization in consolidating and developing the business (eg: electronic commerce, e-banking, etc.), the computer system provides the necessary information to control the fulfillment and adaptation of the plans operational and strategic aspects of the organization, the organization must know and control the risks related to the implementation of the new ones technologies and adaptation of the computer system to the new requirements, establishing standards at the level of the information system that are meant to specify the hardware and software features and performance of the components to be purchased and what methodologies are to be used in the development of the system (Hewitt, 2019; Stover, 2019).

The level of strategic and tactical management is characterized by the request for data: adhoc, unanticipated, determined by a certain context created in which the manager is obliged to substantiate his decision, synthesized: as we climb the steps of the managerial hierarchy there is a selection and a gradual synthesis of information, predictive, allowing the anticipation of the evolution trends of the led process, external to define the economic, financial, competitive environment (Venners, 2020; Kumar, 2020).

In the case of operational management, which is characterized by structured decisions, the data provided are: default, their content covering the information need to be determined by the decisions of routine taken at this level, detailed because the manager must know in detail how to run an activity in its area of responsibility. They are obtained with a certain frequency, the moment of providing the information being predetermined.

2. The architecture of interfaces for classes

Extending classes using a legacy as a single implementation creates new types of classes. A superclass reference can indicate objects of its own type and subclasses strictly in accordance with the inheritance hierarchy. Because this relationship is linear, it excludes the multiple inheritance of the implementation, ie a subclass that inherits from several superclasses. Instead, Java provides interfaces, which not only allow the introduction of new named reference types, but also allow the inheritance of several interfaces. Defining interfaces

A top-level interface has the following general syntax:

```
<accessibility modifiers> interface <interface name>
<extends interface clause> // Interface header

{// Interface body
      <constant declarations>
      <method prototype declarations>
      <nested class declarations>
      <nested interface declarations>
    }
```

In the interface header, the interface name is preceded by the keyword interface. In addition, the interface header may specify the following information:

- purpose modifier or accessibility;
- any interface it extends.

The interface body may contain member statements that include

- constant statements;
- method prototype statements;
- nested class and interface statements.

An interface offers no implementation and is therefore abstract by definition. This means that it cannot be initiated, but classes can implement it by providing implementations for its method prototypes. The statement of an interface abstract is superfluous and is very rare.

Membership statements can appear in any order in the body of the interface. Because the interfaces are intended to be implemented by classes, the interface members have public accessibility by default and the public modifier is omitted (Hewitt, 2019; Horstmann, 2018).

Empty-body interfaces are often used as markers to label classes as having a certain property or behavior. Such interfaces are also called capacity interfaces. Java APIs provide some examples of such markup interfaces: java.lang.Cloneable, java.io.Serializable, java.util.EventListener.

Prototype Statement Method

An interface defines a contract by specifying a set of method prototypes, but no implementation. The methods in an interface are implicitly abstract and public by virtue of their definition. A prototype method has the same syntax as an abstract method. However, only abstract and public modifiers are allowed, but they are invariably omitted.

```
<return type> <method name> (<parameter list>) <throws clause>;
```

Example declaration of two interfaces: IStack and ISafeStack.

```
interface IStack {                                                    // (1)
    void   push(Object item);
    Object pop();
}

class StackImpl implements IStack {                                   // (2)
    protected Object[] stackArray;
    protected int      tos;  // top of stack

    public StackImpl(int capacity) {
        stackArray = new Object[capacity];
        tos        = -1;
    }

    public void push(Object item)                                     // (3)
        { stackArray[++tos] = item; }

    public Object pop() {                                             // (4)
        Object objRef = stackArray[tos];
        stackArray[tos] = null;
        tos--;
        return objRef;
    }

public Object peek() { return stackArray[tos]; }
}

interface ISafeStack extends IStack {                                 // (5)
    boolean isEmpty();
    boolean isFull();
}
```

```
class SafeStackImpl extends StackImpl implements ISafeStack {
// (6)

    public SafeStackImpl(int capacity) { super(capacity); }
    public boolean isEmpty() { return tos < 0; }        // (7)
    public boolean isFull() { return tos >= stackArray.
length-1; }// (8)
}

public class StackUser {

    public static void main(String[] args) {            // (9)
        SafeStackImpl safeStackRef  = new SafeStackImpl(10);
        StackImpl     stackRef      = safeStackRef;
        ISafeStack    isafeStackRef = safeStackRef;
        IStack        istackRef     = safeStackRef;
        Object        objRef        = safeStackRef;

        safeStackRef.push("Dollars");                   // (10)
        stackRef.push("SirExample");
        System.out.println(isafeStackRef.pop());
        System.out.println(istackRef.pop());
        System.out.println(objRef.getClass());
    }
}
```

Output program:

```
SirExample
Dollars
class SafeStackImpl
```

Implementing interfaces

Any class can choose to implement, in whole or in part, zero or more interfaces. A class specifies the interfaces that it implements as a comma-separated list of unique interface names in an implementation clause in the class header. Interface methods must be publicly accessible when implemented in the classroom or subclass. A class cannot restrict the accessibility of an interface method, nor can it specify new exceptions to the discard method, because attempting to do so would mean changing the interface contract, which is illegal. The criteria for overpressure methods also apply to the implementation of interface methods (Stover, 2019; Goetz, 2020).

A class can provide implementations of the methods declared in an interface, but does not take advantage of the interfaces unless the interface name is explicitly specified in its implementation clause.

In the previous example, the StackImpl class implements the IStack interface, specifying both interface names using the implement clause in its class header and providing the implementation of the interface methods. Changing the public accessibility of these methods in the classroom will lead to a compilation error, as this would reduce their accessibility.

A class can choose to implement only some of the methods of its interfaces, to provide a partial implementation of its interfaces. The class must then be declared abstract. Please note that the interface methods cannot be declared static, as they include the contract performed by the objects of the class that implements the interface. Interface methods are always implemented as instance methods.

The interfaces that a class implements and the classes that it extends directly or indirectly are called class supertypes. Instead, the class is a subtype of its supertypes. Classes that implement interfaces introduce the inheritance of multiple interfaces into their linear implementation inheritance hierarchy. However, keep in mind that no matter how many interfaces a class implements directly or indirectly, it provides only one implementation of a member that could have multiple statements in the interfaces (Venners, 2020; Horstmann, 2018).

Extension of interfaces

An interface can extend other interfaces using the extension clause. Unlike expanding classes, an interface can extend multiple interfaces. Interfaces extended by an interface, directly or indirectly, are called superinterfaces. Instead, the interface is an interface of its superinterfaces. Because interfaces define new reference types, superinterfaces and subinterfaces are also supertypes and subtypes.

A subinterface inherits all methods from its superinterfaces, because their method statements are implicitly public. A subinterface can replace the prototype statements in its superinterface method. Overworked methods are not inherited. The method prototype statements can also be overloaded, analogous to the method overload in the class.

The above example provides an example of multiple inheritance in Java. In the previous example, the ISafeStack interface extends the IStack interface. The SafeStackImpl class extends both the StackImpl class and implements the ISafeStack interface. Both the implementation and inheritance hierarchies of the interface for classes and interfaces are defined in the previous example.

In UML, an interface looks like a class. One way to differentiate between them is to use an "interface" stereotype. The interface inheritance is shown similarly to the implementation inheritance, but with a dotted inheritance arrow. Thinking in terms of types, each reference type in Java is an object type

subtype. This means that any type of interface is also an object type subtype (Hewitt, 2019; Goetz, 2020).

It is instructive to observe how the SafeStackImpl class implements the ISafeStack interface: it inherits the implementations of the push () and pop () methods from its StackImpl superclass and offers its own implementation of the isFull () and isEmpty () methods from the ISafeStack interface. The ISafeStack interface inherits two method prototypes from its IStack superinterface. All its methods are implemented by the SafeStackImpl class. The SafeStackImpl class implements the IStack interface by default: implements the ISafeStack interface that inherits from the IStack interface. This is easily evident from the diamond shape of the inheritance hierarchy. There is only one legacy of the implementation in the SafeStackImpl class.

We note that there are three different inheritance relationships in the workplace when defining inheritance between classes and interfaces:

The inheritance hierarchy of linear implementation between classes: one class extends another class subclasses - superclasses. Multiple inheritance hierarchy between interfaces: one interface extends other interfaces, subinterfaces - superinterfaces.

Multiple interface inheritance hierarchy between interfaces and classes: a class implements interfaces. Although interfaces cannot be initiated, interface type references can be declared. References to objects in a class can be assigned to references to class supertypes. In the previous example, an object of the SafeStackImpl class is created in the main () method of the StackUser class. The object reference value is assigned to the references of all object supertypes, which are used to manipulate the object.

3. The usage of interfaces in classes and objects

Constants in interfaces

An interface can also define named constants. Such constants are defined by field declarations and are considered public, static and final. These modifiers are usually omitted from the statement. Such a constant must be initiated with an initiator expression.

An interface constant can be accessed by any client, a class, or an interface using its fully qualified name, regardless of whether the client extends or implements its interface. However, if a client is a class that implements this interface or an interface that extends this interface, the client can directly access such constants without using the fully qualified name. Such a client inherits the interface constants. The typical use of constants in interfaces is illustrated in the following example, showing both direct access and the use of fully qualified names (Stover, 2019; Horstmann, 2018).

Extending an interface that has constants is analogous to extending a class with static variables. In particular, these constants can be hidden by subinterfaces. In the case of multiple inheritance of interface constants, any name conflict can be resolved using fully qualified names for the constants involved.

Example Interface variables

```
interface Constants {
    double PI_APPROXIMATION = 3.14;
    String AREA_UNITS = " sq.cm.";
    String LENGTH_UNITS = " cm.";
}

public class Client implements Constants {
    public static void main(String[] args) {
       double radius = 1.5;
       System.out.println("The area of the circle is " +
                          (PI_APPROXIMATION*radius*radius) +
                          AREA_UNITS);  // (1) Direct access.
       System.out.println("The circumference of the circle is " +
                          (2*Constants.PI_APPROXIMATION*radius) +
                           Constants.LENGTH_UNITS); // (2) Fully
qualified name.
    }
}
```

Output program:

```
The area of the circle is 7.0649999999999995 sq.cm.
The circumference of the circle is 9.42 cm.
```

Type hierarchy

Arrays are objects in Java. Array types (boolean [], Object [], StackImpl []) by default increase the inheritance hierarchy. The inheritance hierarchy can be increased by the corresponding matrix types. An array type is shown as a "class" with the note [] attached to the element type name. The SafeStackImpl class is a subclass of the StackImpl class. The corresponding array types, SafeStackImpl [] and StackImpl [], are shown as subtype and supertype, respectively, in the type hierarchy. The example also shows array types corresponding to primitive data types.

From the type hierarchy, the following can be summarized:

- All reference types are object subtypes. This applies to classes, interfaces and array types, as they include all reference types.
- All arrays of reference types are also subtypes of the Matrix type Object [], but arrays of primitive data types are not. Note that the array type Object [] is also a subtype of the object type.
- If a reference type is a subtype of another reference type, then the corresponding matrix types also have a similar subtype-supertype relationship. There is no subtype-supertype relationship between a type and its corresponding matrix type.

We can create a number of interface types, but we cannot initiate an interface (as is the case with abstract classes). In the statement below, the reference iSafeStackArray is of type ISafeStack [], (that is, a range of interfaces of type ISafeStack). The table creation expression creates an array whose element type is ISafeStack. The array object can host five ISafeStack references. The following statement does not initialize these references to indicate objects:

```
ISafeStack[] iSafeStackArray = new ISafeStack[5];
```

A matrix reference has a polymorphic behavior like any other reference, subject to its placement in the type hierarchy. However, a runtime check may be required when objects are inserted into a vector, as the following example illustrates.

The following assignment is valid because a supertype reference (StackImpl []) can denote objects of its subtype (SafeStackImpl []):

```
StackImpl[] stackImplArray = new SafeStackImpl[2];
```

Because StackImpl is a supertype of SafeStackImpl, the following allocation is also valid:

```
stackImplArray[0] = new SafeStackImpl(10);
```

The assignment at the previous example inserts a SafeStackImpl object into the SafeStackImpl [] object (that is, the SafeStackImpl array) created in (1). Because the stackImplArray [i] type, (0 i <2), is StackImpl, the following allocation should also be possible:

```
stackImplArray[1] = new StackImpl(20);              //
ArrayStoreException
```

There are no issues during compilation, as the compiler cannot deduce that the stack variable stackImplArray will actually name a SafeStackImpl [] object at runtime. However, assigning to (3) causes the ArrayStoreException to be thrown at runtime, because a SafeStackImpl [] object cannot contain StackImpl objects.

Allocation, transfer and change of reference values

Reference values, like primitive values, can be assigned, passed, and passed as arguments. For values of primitive data types and reference types, conversions may occur over time

- Mission
- passing the parameters
- explicit change

The main rule for primitive data types is that broadening conversions is allowed, but reducing conversions requires explicit distribution. The main rule for reference values is that conversions up to the type hierarchy (upcasting) are allowed, but conversions in the hierarchy require an explicit casting - downcasting. In other words, conversions that are from one subtype to its supertypes are allowed, other conversions require explicit distribution, or are illegal. There is no notion of promotion for benchmarks.

Reference value assignment conversions

In general, reference value allocations are allowed up to the type hierarchy, with the default conversion of the source reference value to that of the destination reference type.

Example for allocating and passing reference values:

```
IStack interface {/ * From the previous Example * /}
ISafeStack interface extends IStack {/ * From Previous Example * /}
class StackImpl implements IStack {/ * From Previous Example * /}
class SafeStackImpl extends StackImpl
          ISafeStack implements {/ * From the previous Example * /}

public class ReferenceConversion {

    public static void main (String [] args) {
   // Reference declarations
```

```
   Object objRef;
   StackImpl stackRef;
   SafeStackImpl safeStackRef;
   IStack iStackRef;
   ISafeStack iSafeStackRef;

   // SourceType is a class type
   safeStackRef = new SafeStackImpl;
   objRef = safeStackRef; // Always possible
   stackRef = safeStackRef; // Subclass to superclass assignment
   iStackRef = stackRef; //  StackImpl implements IStack
   iSafeStackRef = safeStackRef; // SafeStackImpl implements
ISafeStack

   // SourceType is an interface type
   objRef = iStackRef; // Always possible
   iStackRef = iSafeStackRef; // Sub- to super-interface assignment

   // SourceType is an array type.
   Object [] objArray = new Object [3];
   StackImpl [] stackArray = new StackImpl [3];
   SafeStackImpl [] safeStackArray = new SafeStackImpl [5];
   ISafeStack [] iSafeStackArray = new ISafeStack [5];
   int [] intArray = new int [10];

  // Reference value assignments
  objRef = objArray; // Always possible
  objRef = stackArray; // Always possible
  objArray = stackArray; // Always possible
  objArray = iSafeStackArray; // Possible always
  objRef = intArray; // (11) Always possible
  // objArray = intArray; // Compile-time error
  stackArray = safeStackArray; // Subclass array to superclass array
  iSafeStackArray =
               safeStackArray; // SafeStackImpl implements ISafeStack

 // Parameter Conversion
 System.out.println ("First call:");
 sendParams (stackRef, safeStackRef, iStackRef,
                   safeStackArray, iSafeStackArray); //
// Call Signature: sendParams (StackImpl, SafeStackImpl, IStack,
// SafeStackImpl [], ISafeStack []);

System.out.println ("Second call:");
sendParams (iSafeStackArray, stackRef, iSafeStackRef,
                   stackArray, safeStackArray); // (16)
// Call Signature: sendParams (ISafeStack [], StackImpl,
```

```
ISafeStack,
// StackImpl [], SafeStackImpl []);
}

public static void sendParams (Object objRefParam, StackImpl
stackRefParam,
   IStack iStackRefParam, StackImpl [] stackArrayParam,
   final IStack [] iStackArrayParam) {// (17)
// Signature: sendParams (Object, StackImpl, IStack, StackImpl [],
IStack [])
// Print class name of object denoted by the reference at runtime.
   System.out.println (objRefParam.getClass ());
   System.out.println (stackRefParam.getClass ());
   System.out.println (iStackRefParam.getClass ());
   System.out.println (stackArrayParam.getClass ());
   System.out.println (iStackArrayParam.getClass ());
    }
}
```

Output program:

```
First call:
class SafeStackImpl
class SafeStackImpl
class SafeStackImpl
class [LSafeStackImpl;
class [LSafeStackImpl;

Second call:
class [LSafeStackImpl;
class SafeStackImpl
class SafeStackImpl
class [LSafeStackImpl;
class [LSafeStackImpl;
```

The rules for assigning the reference value are declared on the basis of the following code:

```
SourceType srcRef;
// srcRef is appropriately initialized.
DestinationType destRef = srcRef;
```

If an assignment is legal, then the srcRef reference value is said to be attributable (or a compatible task) to the DestinationType reference. The rules are illustrated by concrete cases from the previous example.

If SourceType is a class type, then the reference value in srcRef can be assigned to the destRef reference, provided that DestinationType is one of the following:

- DestinationType is a superclass of the SourceType subclass.
- DestinationType is a type of interface that is implemented by the SourceType class.

```
objRef        = safeStackRef;  //  Always possible
stackRef      = safeStackRef;  //  Subclass to superclass
assignment
iStackRef     = stackRef;      //  StackImpl implements IStack
iSafeStackRef = safeStackRef;  //  SafeStackImpl implements
ISafeStack
```

If SourceType is an interface type, then the reference value in srcRef can be assigned to the destRef reference, provided that DestinationType is one of the following:

- DestinationType is the object.
- DestinationType is a superinterface of the SourceType subinterface.

```
objRef    = iStackRef;     //  Always possible
iStackRef = iSafeStackRef; //  Subinterface to superinterface
assignment
```

If SourceType is an array type, then the reference value in srcRef can be assigned to the destRef reference, provided that DestinationType is one of the following:

- DestinationType is the object.
- DestinationType is an array type, where the SourceType element type is attributable to the DestinationType element type.

```
objRef = objArray; //  Always possible
objRef = stackArray; // Always possible
objArray = stackArray; // Always possible
objArray = iSafeStackArray; // Always possible
objRef = intArray; // Always possible
// objArray = intArray; // Compile-time error
stackArray = safeStackArray; // Subclass array to superclass
array
iSafeStackArray = safeStackArray; // SafeStackImpl implements
ISafeStack
```

Allocation rules are applied at compile time, ensuring that no type conversion errors occur during runtime allocation. Such conversions are type safe. The reason the rules can be applied to compilation is that they target the reference type (which is always known at compile time) and not the actual type of the object being referenced (which is known at runtime) (Horstmann 2018; Goetz 2020).

4. Conclusions

Encapsulation of objects has important advantages in programming, because it increases the security and reliability of programs, by eliminating the possibility of accidental modification of their values due to unauthorized access from the outside. Because of this, programmers generally avoid providing public data in an object, preferring to access data only by methods. The visible or public part of the object constitutes its interface with the outer world. It is possible for two different objects to have identical interfaces, ie to present the same data and methods on the outside (Stover, 2019; Kumar, 2020). Due to the fact that the encapsulated part differs, such objects may behave differently. Aggregation is the property of objects to be able to incorporate other objects. However, the „data" contained in an object can be not only primitive data, but also objects. This allows you to create objects with increasingly complex structures (Venners, 2020; Stover, 2019). Classification is the property of objects that have the same data structure and the same behavior (the same methods) to be grouped into a class. The class is an abstraction, which contains those properties of objects that are important in one application or category of applications, and ignores the others. In order to define custom model formats, it is necessary to define multiple interfaces for later implementation of classes that maps object defined in business logic and implementation.

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MANAGEMENT OF CYBERCRIME IN THE FINANCIAL FIELD - PERSPECTIVES TO COMBAT THE PHENOMENON

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Abstract: *The contemporary context requires us to be efficient, and to achieve this goal we must be up to date with the latest information and the latest technological innovations. Human society is in a new stage of development whose vectors are represented by digitalization, innovation and globalization. Through intelligent systems and techniques in the form of computer systems and artificial intelligence, the degree of satisfaction of human needs has reached a much higher level. Information and telecommunications technology takes control in more and more aspects of life, in the vast area of benefits and huge transformations induced by the digitalization of society finding an unprecedented speed of information flow, reducing distances and response time, the development of e-commerce (e-commerce), the crystallization of the highly digitized goods and services sector which includes digitally delivered products and services with predominantly digital content, the development of distance learning (e-learning), bank cards, transfers and electronic payments intensify cash flows, allowing capital movements to move to all corners of the world in a fraction of a second, the restructuring of companies and business in general, management being forced to adapt to the stresses of globalization and diversification, changing social relations.*

Keywords*: Blockchain, Ledger Technology, Bitcoin, IT crimes, Money Laundering, cryptography, technology*
JEL Classification : *C23, C26, C38, C55, C81, C87*

Introduction

Seen from this perspective, of the digitalization and globalization of activities, in which corporations expand their sphere of action beyond national borders, creating networks of strategic alliances, it is predictable the phenomenological change of large financial scams that endanger national, regional or even international economic stability. In the context of the information explosion in all fields, traditional crime has adapted to the economic, financial and social situation, increasing the degree of refinement of activities. The dominant role of state-of-the-art information and communication technology, the new realities outlined in the sphere of financial innovations, makes some criminal acts more effective, aspects that are reflected in a new dimension of traditional crime, cybercrime. Unlike traditional crime, the specificity of cybercrime is given by the complexity of the means used and the magnitude of the result. Similar to classic crime, cybercrime can take a wide range of ways and can be found in a variety of social settings. Thus, the computer is becoming more and more involved in all forms of delinquency.

The issue of cybercrime and the management of the activity of preventing, investigating and combating this form of crime is a concern for both the theoretical side, the profile literature and the practical side, large private corporations, companies that offer security solutions cybernetics, law enforcement agencies, implicitly the level dedicated to public order and national security, but also a concern of individuals. In the context of the intensification of cybercrime, there is a broad convergence of opinions among specialists in the field, when they describe the changes in traditional crime in general and in economic and financial crime, in particular, in the sense that they claim with the more urgent changes in the tools for detecting and countering cybercrime, as well as in the field of cyber security strategies. The increase of attention on the approach of cybercrime is justified on the one hand by the ambiguity of the definition of theoretical terms and concepts, which find a severe invalidation in practice taking into account the diversity of reality, on the other hand the low level of training of persons in the field of cyber security explainable by the high level of technology in the field, and on the other hand by the specificity of cybercrime to launch large-scale attacks and operations, escalating national borders and defying time zones.

1. Cybercrime trends

The cybercrime landscape continues to evolve as criminals seek to adopt increasingly effective and profitable attack tactics. Cybercriminals are increasingly busy identifying new and advanced attack techniques, ranging from „families" of malicious programs to personal computers to malicious programs for smartphones, from viruses to personal computers to illegal cloud-based facilities. At the same time, the cybercrime sector is advancing rapidly amid competition from malicious software vendors, which is leading to increased innovation. The underworld continues to develop service packages that allow more and more evaders to get cash, without having to understand what the fraudulent circuit is, how to carry out a phishing or spamming attack, or what are the requirements of IT infrastructure. The market for services in the range of cybercrime is growing so fast that providers of such services are forced to work harder than ever to win and retain customers. Attractive options for potential customers include demo versions of products that can be tested before they can be purchased (for example, smartphone apps that buy compromised payment cards), money back guarantees, or reparation of damages (as an example we mention the case in which a purchased payment card is canceled by the legal holder-victim, the buyer is given another card or refunded), forums that allow grades to be given to sellers and services provided, posting comments, reporting sellers scamming buyers.

Smartphones are gaining an increasingly important role in everyday life. Smartphones are used for an increasing number of activities and often store sensitive data, such as contact information and passwords. Recent innovations in e-commerce allow users to make transactions on smartphones. As the penetration rate of smart phones in society reaches record levels globally, cybercriminals are increasingly targeting these smart mobile computing devices. Lately, the most significant increase has been registered by the banking Trojans that penetrate smart phones.

Recent studies have revealed a development of the types of cyber attacks as cybercriminals have sought new ways to steal credit cards and gain unauthorized access to money. Instead of wasting time launching phishing attacks or using online social engineering on individuals, cybercriminals break into the computer systems of major trade concerns and steal identification data stored in databases. To counter these trends, law enforcement organizations and agencies need to opt for information-based security and fraud prevention approaches that can take place in mobile and cloud environments, make more use of behavioral analysis, and take advantage of the capabilities of smart mobile devices to protect users and the data stored on them. Even if attacks cannot be completely blocked, access to the right information makes it possible

to detect a cyber attack faster, significantly reducing the attacker's area of operation and opportunities and minimizing the potential for loss or damage to computer data. In the process of identifying and locating international cybercriminals related to cyber intrusions, bank fraud, data breaches, and other crimes related to computer systems, law enforcement agencies are required to prioritize the recruitment and training of technical experts, to develop standardized methods of investigation and exchange of best practices and response tools on cyber incidents. Cybersecurity investigators and experts face the challenge of understanding in detail the ways and malicious techniques used by cybercriminals, as well as the vulnerabilities that are their potential targets, to effectively respond to and investigate security incidents cybernetics. Against the background of the diversification of cyber attacks, the development and use of Blockchain technology, mainly in the financial sector, will become a tool to stop financial crime.

2.Blockchain applications in the financial sector and their impact in the fight against money laundering and terrorist financing

The analysis of the specialized literature carried out in the first two parts of the paper, allowed me to acquire essential knowledge about the analyzed concepts - the magnifying glass against money laundering and the financing of terrorism and blockchain technology. The information collected from credible sources and authors provided a solid knowledge base, necessary to understand the relationship between the two topics addressed. Furthermore, the next section will address the impact of blockchain technology on the prevention of money laundering and terrorist financing by financial institutions. To do this, I will analyze how blockchain-based solutions for financial institutions implement the basis of the major components of money laundering / terrorist financing prevention (data quality, reporting to regulators, data security and confidentiality).

After discussing the problems caused by money laundering activities through an institutional framework, this paper aims to present a feasible solution to combat money laundering, specially designed for Bitcoin. Game theory serves as a powerful tool for observing and analyzing incentives, which is why this paper invents several theoretical game models, aiming to create incentives to prevent the attractiveness of money laundering. The feasibility of the above-mentioned model will be carefully examined. Before analyzing the applications of the blockchain on the financial sector, especially in the banking field, it is important to look back and understand how the financial sector has evolved as we know it today.

The traditional banking industry follows a centralized structure. In its primary and basic form, it consists of individuals who use banks to deposit their fiat money. Of course, banks offer useful services, deposit accounts being the most important products of banking. If a third party manages the funds and transactions of customers, it is obviously subject to payment for services. So why do people pay these taxes instead of keeping their own financial assets? The answer is as simple as a cost-benefit analysis - the benefits of using centralized banking services outweigh the costs. We can conclude that there are three main advantages in using centralized banks, the first being security. If individuals would deposit their funds in their homes or choose to carry their monetary assets on them, there would be some associated risks - natural disasters or theft that would lead to the disappearance of money. In fact, not claiming funds can, in some cases, be considered tax evasion or money laundering.

The second reason why individuals choose to place their funds in a bank is, so far, the most efficient way to store and manage money. Banks facilitate day-to-day financial activities, such as paying bills, transferring money to others, and purchasing goods or services. In fact, accessing personal finance has become increasingly easy with online banking and mobile applications that allow individuals to check their accounts and balances through mobile devices. Finally, banks generate added value to their customers, rewarding them with interest, even if interest rates are low (Egilsson, 2017). Until the creation of Bitcoin, there was no alternative to centralized financial services. Digital banking has become a reality, raising the issue of double spending. However, Bitcoin has emerged as the first cryptocurrency that has not allowed spending to be doubled, making digital banking a feasible reality. Blockchain allows users to convert fiat money into cryptocurrencies without the need for an intermediary. Also, due to the decentralized structure of the technology, peer-to-peer transactions can take place without the permission of a central entity, such as a bank, because the validation of transactions is done through consensus mechanisms. The high level of security offered by the blockchain is largely caused by the principle of immutability.

As mentioned earlier in the report, it is extremely difficult to change any data embedded on the blockchain, as it would require a large amount of time, effort and computing power. In addition, each information is encrypted using a hash function that is a one-way function, which means that the hash code cannot be returned to the data originally converted to code. The decentralized structure of the technology implies that blockchains cannot be modified from a single computer, because they are not located in a single location, but distributed in peer-to-peer networks. Therefore, for a single party

or group of entities to gain control over the blockchain, an extraordinarily large amount of computing power would be required to simultaneously access and modify a minimum of 51% of the blockchain (Miles, 2017). The 51% attack is more common in public networks that use Proof-of-Work to validate transactions. The security level of a blockchain varies depending on the type of network - public or private. Public networks can be accessed by anyone with an Internet connection, but blockchain actors remain anonymous. Thus, public blockchains, such as Bitcoin or other cryptocurrencies, pose a higher risk due to the lack of access restrictions - anyone can be part of the network without first having to declare their identity. In a private setting, access is usually restricted to members of an organization. Here the principle of anonymization is not valid, because the organization controls read and write permissions. Moreover, all participants are required to identify themselves in order to have access to the network (Ometoruwa, 2018). Miles points out that the potential security problems of private networks, coming from malicious people, can be solved with a highly secure infrastructure. According to the author, such an infrastructure must prevent unauthorized parties from accessing sensitive data - even root users and system administrators, refusing any attempt to change blockchain information that would cause illegal activity and save encryption keys (Miles, 2017).

Compared to centralized systems, blockchain offers increased efficiency in cross-border transfers and transactions. In a traditional banking structure, cross-border transfers are subject to a longer validation process than domestic transfers, often taking longer, often several days, until the transfer is completed. Blockchain does not have a separate procedure for validating domestic or cross-border transactions. Therefore, the process of verifying cross-border transactions is more efficient with blockchain, which is an important feature, given the importance of global trade today. As mentioned earlier, banks have service fees associated with their range of financial products. These fees are necessary for banks to cover their costs and continue their business. On the other hand, financial institutions also reward customers with interests. When it comes to costs, a blockchain network, once established, does not require additional expenses on behalf of members, but only the usual maintenance costs. There are cases where cryptocurrencies are offered as incentives to reward participants in transactions, as previously explained when using Proof-of-Work.

It is reasonable to imagine a future with both centralized and decentralized banking. From the customer's point of view, the fact that both options are available is a positive aspect, as there will be more alternatives for managing finances. However, from the point of view of financial institutions, decentralized banking is a new competitor. In addition, it is extremely important for financial institutions to develop appropriate strategies to deal with this

new reality. In fact, banks have begun to adopt blockchain-based structures to capitalize on the benefits of technology.

The benefits of adopting Blockchain ecosystems by financial institutions

Trading. The traditional asset trading process can be divided into three distinct phases - execution, clearing and settlement. The first occurs when the individual or organization selling the guarantee finds an entity willing to buy. Once the counterparties agree to the terms of exchange, the procedures for transferring the collateral property to the buyer and the payment to the seller begin. These procedures are part of the clearing stage, the most complex of the three stages (Fronda, 2019), because this stage includes - placement, calculation of financial margins, and management of risks associated with the transaction (Rodgers, 2019). Finally, the settlement takes place once the transaction is completed, which means that the security guarantee is fully assigned to the buyer and the money is available in the seller's account. According to Benos and Gurrola from the Bank of England, the traditional asset trading process, namely the clearing and settlement stages, can be time and money consuming. To ensure that the risks inherent in the exchange are properly managed and mitigated, banks use several complex procedures. Consequently, transaction costs increase and the settlement can take up to three days to complete (Benos, 2017: 2-5). Blockchain eliminates the need for third party intervention in the exchange of securities, because the payment goes directly to the seller's wallet and vice versa. Distributed ledger technology also allows the settlement time to be reduced from two to three days to a maximum of a few seconds or a few minutes. However, real-time settlement is only possible if a cryptocurrency is used as a method of payment, otherwise banks are required to convert fiat money into cryptocurrencies in order to complete the transaction. Due to currency volatility, this process could be difficult to accomplish. McKinsey suggests using stable currencies as a solution to the problem of volatility, because the value of these currencies is related to real-world assets. However, an intermediary must still perform the conversion (Higginson, 2019).

Cross-border payments. Similar to asset transactions, cross-border transactions are also associated with high costs when it comes to settlement time. Thus, distributed ledger technology could be a suitable alternative. However, conversion and volatility are significant when talking about cross-border payments, as each transaction involves at least three distinct currencies: the sender's national currency, the cryptocurrencies to which fiat money must be converted to be used in the blockchain network, and the national currency of the recipient. Compared

to asset trading (assuming the buyer and seller are from the same country), each transaction requires at least two currency conversions, instead of one. Volatility issuance also increases when we use an additional currency. However, several companies have managed to develop appropriate cross-border blockchain-based payment systems. In the financial sector, Santander Bank has pioneered the development of a cross-border payment service based on distributed ledger technology. On April 12, 2018, the Spanish bank launched Santander One Pay FX. The technology behind it is xCurrent, a distributed ledger technology developed by Ripple. The service allows international transfers to be settled on the same day, in most cases, or the next day. In addition, senders can view, in consultation, the exact amount that the correspondent will receive at the destination, in case of transfer (Santander, 2018).

Data Base. Auditors face certain challenges in their work, especially when auditing large companies that have a multinational field of activity. The information is dispersed through various databases within the organization, which makes it difficult to examine it globally and detect any problems. The blockchain would allow the standardization of accounting and data storage, while providing a relevant analysis of customer activity in a single data warehouse. The transparency and immutability features inherent in this technology make it attractive to auditors and regulators. Because all transactions on the blockchain are endowed with a "time stamp," it is possible to perform an unrestricted audit trail, as auditors can easily track and reconstruct the records of all transactions. The quality and veracity of records kept by financial institutions is another predominant issue, which not only makes auditing a long and difficult process, but also harms the day-to-day business of financial institutions. After design, all transactions must be validated and verified to be part of the blockchain. Regardless of the consensus mechanism chosen, the veracity of the records kept in the distributed register is ensured.

Identity and data privacy. Although confidentiality and transparency seem to be opposing concepts, a distributed record technology allows both attributes to coexist perfectly. In public networks, the degree of confidentiality is higher compared to the degree of transparency, because members are allowed to choose what identity elements they transmit to the network - because blockchain data is cryptographically secure, individuals can act anonymously if they wish to do so. this thing. On the other hand, not all members have the same permissions in private blockchains. If regulators belong to the Blockchain network, they may be allowed to disclose the identity of other members of the blockchain, while another element, such as a customer of a financial institution, will not receive this access. Therefore, transparency goes beyond confidentiality in this case.

However, if permissions are allocated correctly and carefully, confidentiality can continue to be maintained, providing the necessary transparency for regulators and supervisors.

3. Disadvantages in Blockchain adopting

Despite the advantages offered by the distributed registry, there are several obstacles that prevent financial organizations from adopting blockchain-based strategies. Between February and March 2019, Deloitte conducted an international blockchain opinion poll on a sample of 1,386 senior executives from various financial organizations, along with 31 Blockchain ecosystem developers. The main barriers to adopting and investing in blockchain technology, which respondents specified are: regulatory issues (30%), replacement of old systems (30%), potential security threats (29%) and lack of knowledge, and internal skills (28%). However, 86% of respondents agreed that the blockchain is sufficiently scalable to obtain use validation, and 83% of respondents mentioned that blockchain use is the perspective in the financial system (Deloitte Global Blockchain Survey, 2019). PricewaterhouseCoopers (PwC) conducted a similar survey in 2018. The sample used was much smaller compared to the Deloitte sample size but was more significant as it included 600 CFOs from 15 different geographical regions. Respondents listed similar barriers to the adoption of distributed networks, namely regulatory uncertainty (48% 2), lack of trust among employees (45%) and the ability to benefit from the effects of the network (44%). The authors of the study predict that, by 2030, distributed ledger technology will generate a larger annual business by three trillion US dollars, compared to 2018 (PwC, 2018, Global Blockchain Survey).

Conclusions

After analyzing the information identified on each main topic, as part of the study of the literature, it was possible to reach some conclusions about the impact of blockchain-based solutions on the management of the fight against money laundering and terrorist financing by financial institutions. In the article, the focus was on use cases that can directly contribute to the fight against money laundering and the financing of terrorism. However, the answer is not yet simple. Here, the main differences come from the type of blockchain used. As we mentioned there are three types of blockchain - public, private and hybrid.

The results of the analysis show that private and hybrid blockchains work better in terms of compliance with the fight against money laundering and the financing of terrorism standards. On the other hand, public blockchains fail

to provide the characteristics needed to be adopted by a financial institution. As the name suggests, public networks can be accessed by anyone with an Internet connection, which is not ideal, given the internal amounts of sensitive and private data on the systems of financial institutions. In addition, public blockchains are completely immutable - because once entered into the network, the data cannot be modified and deleted. Full immutability is not desirable in an organizational context, as data entered on systems may undergo further changes. In addition, a completely immutable network does not comply with the GDPR. Customers must be able to exercise their rights, if they so wish, which implies the possibility to modify or delete personal data from the systems of the institutions. Unlike public networks, private and hybrid blockchains can comply with legal requirements to combat money laundering and the financing of terrorism.

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RECRUITMENT, SELECTION AND INTEGRATION IN THE HUMAN RESOURCE MANAGEMENT

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Abstract: *In the human resource field, in order to be successful and especially to survive, organisations in general and companies, in particular, have to settle the following aspects: to identify the qualifications and skills and to choose the candidates that suit best the requirements of the vacancy or newly created jobs; to identify and attract competitive candidates using the most appropriate methods, sources or head hunting environments; to comply with the legislation in the field regarding equal opportunities for employment and to correct the existing discriminatory practices or some imbalances.*
Keywords: *Recruitment, Internal Recruitment, External Recruitment, Selection, Job*
JEL Classification: *M12, 012*

Recruitment and selection of personnel

Recruitment
The process of searching, localization, attraction of potential candidates, from whom capable candidates are to be selected, who eventually show the necessary professional characteristics or who best correspond to the requirements of current and future vacancy jobs (Câmpeanu-Sonea & Osoian, 2004, p. 101).

The recruitment process generally includes all the stages that the organisation proposes to pursue in order to search the corresponding candidate to fill a vacancy job.

− Prepare the recruitment
− Analyse the application

- Job description
- Define the candidate profile
- Search candidacies
- External candidacies. Recruitment sources
- Recruitment announcement campaign
- Select the candidates

Characteristics:

- it is an interaction process between organisation and candidates where parties can attract or reject each other;
- it is a bi-dimensional process where the candidate should be satisfied with the organisation, and the organisation with the candidate involved in the process;
- it is a double-way communication process where the parties send each other signals;
- requires compromises between the parties for the harmonisation of their requirements and preferences
- requires full transparency of both parties, it has to be based on accurate and real data and information that can be tested in any moment.

In the management practice, there are several methods that can be used to recruit potential employees:

- advertising
- acquaintance network
- use of counsellors
- search of persons
- file with potential candidates

Advertising

Advertising is a vital element for the recruitment process. The objective pursued should be to penetrate the labour market as deep as possible with a very attractive employment offer, conceived so that it determines a corresponding reaction from two perspectives:

a) of requests for further information and

b) of number of applications submitted.

The efficiency of an employment ad can be appreciated according to:

- the number of requests for further information;
- the number of the requests for employment;
- the degree compatibility of the employees with the conditions expressed.

Mentioning the age, sex, religion, or nationality for a candidate who is not taken into consideration should be avoided. This is considered discrimination, which is sanctioned by law (Lefter, Deaconu, 2009, p. 113).

In order to be efficient, an employment ad should:

− state the main employment and labour conditions, including the level of salary for such job;

− present the organisation and/or its object of activity with some concise references;

− specify how and to whom the requests for employment should be sent;

− provide concise, but adequate details regarding the outstanding characteristics of the job;

− present all of the above under a concise, yet attractive form;

comply with the legal regulations;

− summary the essential personal features that the job holder should have;

Generally, the attributes that an employment ad need to have to be efficient should cover the following aspects:

- to present the organisation and/or its object of activity with some concise references;
- to provide concise, but adequate details regarding the outstanding characteristics of the job;
- to summary the essential personal features that the job holder should have;
- to state the main employment and labour conditions, including the level of salary for such job;
- to specify how and to whom the requests for employment should be sent;
- to present all of the above under a concise, yet attractive form;
- to comply with the legal regulations.

Avoid mentioning the age, sex, religion, or nationality for a candidate who is not taken into consideration. This is considered discrimination, which is sanctioned by law. For example, in case of hiring storekeeper or manager, the law imposes to be minimum 21 years old, which is advisable to be mentioned in the employment ad – a first selection of candidates is made.

Internal Recruitment

Advantages:

- the organisations have the possibilities to get to know much better the candidates' "strengths" and "weaknesses", because there are enough information on them;

- it is much easier to attract candidates because they are much more known or remarked due to their performed activity;
- the selection according to organisation criteria is much faster and more efficient, because the candidates coming from the inside of the organisation have much more knowledge on organisation practices, which leads to less time to accommodate and integrate on the job;
- although many jobs belonging to some different organisations are similar, only the internal recruitment allows us to obtain the particular qualifications or knowledge and the experience required by some jobs;
- the probability to make inadequate decisions is much diminished due to the higher amount of information on the employees;
- personnel recruitment is, in many situations, much faster and less costly, even if an additional training of candidates is necessary;
- the time corresponding to job counselling of the new employees, for their integration as rapidly as possible, is much more diminished;
- the feeling of belonging to organisation, of loyalty or attachment to it, increases;
- the probability that employees have inadequate expectations or perspectives or that they become disappointed and dissatisfied with the organisation, is much more reduced;
- the motivation of the personnel increases, and the moral environment improves, because the promotion opportunities are incentive, at the same time being considered as important compensations for many employees.

Disadvantages:

- lack of promotions or contribution of some ”new ideas”, of some ”new or fresh openings”;
- the recruitment policy within the organization can suppose erroneously that the employees considered (for promotion) have the necessary qualities or the adequate potential to be promoted, under the circumstances in which their former activity is also interrupted with no reason;
- it favours the manifestation of Peter’ principle, according to which people tend to climb the hierarchy ladder until their level of incompetence or, in other words, the employees are promoted until they reach a level where they are not capable any more to act adequately; it means that employees can be promoted, if accomplishing the tasks

adequately, until they reach such jobs whose demands are higher than their potential;

- favouritism can appear, or many conflict or affective moods (agitation, hostility, resistance, open aggression etc.) can activate, determined by the different way of perception of some facts or situations
- the hope of employees in promotion is not substabtiated, they become indifferent, which eventually leads to their demoralization, to decrease of performance and sometimes to resignations.

External Recruitment

Advantages:

- it offers more options to choose the desired candidate;
- the possibility of attracting some persons with an outstanding professional training;
- although the costs of new employments are significant, there are cases when they are more reduced than the ones necessary to train the internal personnel in order to get some new positions.

Disadvantages:

- the identification, attraction and assessment of candidates is much more difficult if we take into consideration the complexity of the labour market and the fact that the skills or other requirements of the new employees are not assessed directly, but based on some references or on some short-time meetings during interviews;
- the risk of hiring candidates who subsequently prove not to have or cannot keep the high potential they have shown during the selection process;
- the cost of personnel recruitment is much higher due to identification and attraction of candidates from a wide, less known and more difficult ”to accede” labour market, the resources of time and money are much higher;
- the time necessary to counselling, adaptation or integration on positions of the new employees is much higher, attracting additional costs;
- when there are frequent employments outside the organisation, the potential internal candidates can feel frustrated, there can be some resentfulness, discouragement, even some major problems or some moral issues among its own employees, who consider that they meet the necessary conditions, but their chances of promotion are reduced.

Selection

The selection activities aim at identifying the most suitable candidates and to convince them to enter the organisation.

A well-managed selection process, carried out pursuant to the methodology presented, creates an added value in the organisation, because there are sensible differences between a correctly selected employee, loyal to the organisation, with significant performances, and another one, who makes a minimum effort, has modest results, working only to get paid.

A modest employee will impose his/her standard to his/her co-workers, and that is why it is necessary that the selection should avoid as much as possible a part of the costs, which are difficult to estimate, of an unfortunate employment.

The main stages of the selection process are:

- to select the applications or the CVs;
- to make a final (limited) list with candidates;
- to invite these candidates to an interview;
- to carry out the interviews (and the auxiliary tests, if appropriate);
- to make a decision regarding the selected candidates;
- to draft and confirm an attractive offer;
- to notify the rejected candidates in writing;
- to inform the managers regarding the decisions made.

The Interview should offer information on three categories of problems:

- Can the candidate perform the activity provided by the job?
- Does the candidate wish to perform the activity provided by the job?
- Can the candidate integrate into the team where he/she is going to work?

There are a few clear rules for interviews:

- The candidate should be determined to talk as much as possible;
- The environment of the interview should be quiet in order to create a calm and relaxed atmosphere;
- There should not be any interruptions from the outside;
- The interviewer team (it is better to be a team, not one person) should be well-prepared for the interview, to know the job and the candidate file.

Key points in personnel recruitment and selection:

- Recruitment and selection are costly processes.
- The entire fairness of the process can be assured by a thorough analysis of the job and by comparing the particularities and the skills of those who are to occupy it.
- The initial impression on people is usually inaccurate, and if we acted according to it, we would reach inaccurate and poor quality selection decisions.
- The job analysis is a crucial element for the success of the recruitment and selection process.
- The mistakes made at this stage reflect on the entire process.
- The purpose of recruitment is to attract a small number of correspondingly qualified applicants.
- The limited list of candidates to be invited to an interview is made up following the comparison between the capacity and the experience of each applicant, and the job description.

Recruitment, selection and integration in human resources management requires a complex, extensive activity of searching and finding potential candidates for organizations that have vacancies so that they fit the standards, objectives and purpose of the organization.

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THE IMPACT OF MIGRATION ON THE COUNTRY OF ORIGIN

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Abstract: *The analysis of the problems related to the migration of Romanians presupposes the detailed knowledge of the motivations and characteristics of the migrants, of their circulation, but also of some related data, whose influence on the migration phenomenon can be direct or indirect. Knowing the motivations of Romanians to emigrate, but also the strategies used to leave Romania, can give us an overview of the migration phenomenon, with all the variety it covers. These strategies were adapted according to the period in which they migrated, but also according to the possibilities of each individual. Until 2014, the strategies used were: permanent (stable) migration, circular migration, internal migration, return migration and double migration (remigration). After 2015, a new orientation emerged (multiple migration), determined in particular by the fact that these migrants could not adapt to the places where they resettled. These areas represented either Romania or other places in the countries belonging to the European Union*[1]*. The migratory itinerary and social networks argue the existence of the social capital necessary to obtain the migration project. The migration phenomenon can largely be considered*

1 http://www.jdre.ase.ro/revista/JDRE3_ro_2011.pdf

positive for the country of origin, but this phenomenon can also have negative consequences: due to the migration of women of childbearing age; due to the fact that migrants are not only those with an average level of education, but also an important part of intellectual capital; due to the accentuation of depopulation in rural Romania (visible consequence of migration), which has intensified especially in the last two decades (Aceleanu, 2011).

Keywords: *Labor force migration, development*
JEL Classification: *J1, J61, C33*

1. Introduction

Migration is the essential and inevitable component of economic and social growth, for the benefit of the individual and society. The growing importance of the migration phenomenon has transformed its approach and management, from a conjunctural concern, to respond to "specific crises / conditions", in a field of analysis, management, forecasting and coordination through policies and strategies at national, regional and international. Although migratory flows are relatively modest in size on a global scale (Ailenei, 2009) (about 3% of the world's population), for some areas and countries of the world it has become a complex and permanent macro-equilibrium variable, a basic factor of labor market supply.

Also, the inter-country mobility of migrant workers, whether or not accompanied by family, for a short or longer period of time (from a few months to several years) plays an important role in intercultural transfers between states, close to work patterns. (industrial relations) and social relations, emphasizes the dynamics of transfers and technological and non-technological progress, develops new models of life and citizenship at the local level, new work and coexistence behaviors that capitalize on the contemporary values of environmental protection, communion and harmony for maintaining eco-economic and socio-cultural balances (Bauer and Zimmermann, 1998). Therefore, today's and tomorrow's society cannot integrate in harmony and economic and social performance these flows of human capital mobility without promoting integrative strategies and policies.

In the context of Romania's integration into the EU and globalization, the multidimensional analysis of the phenomenon of labor migration is a necessary and possible step, facilitated by the development of common migration policies, the detailed study of the impact of global routes of the population and migrant workers. Labor migration, to a certain extent and under specific, favorable conditions, can turn into permanent migration, the naturalization of migrants and the development of the second generation of migrant population in fact,

citizens already adopted by the host community, which makes the analysis of the stock of Migrant population to grow in importance compared to the simple management of flows, as has been practiced in decades and centuries. The economic and demographic impact in recent decades are the main arguments that have practically opened local communities and nation states to migrant workers and developed integration policies in the host community, as a solution to balance the human capital deficits necessary for development.

2. The effects of migration on the country of origin

The migration process is a complex one with multiple and varied effects not only at community level. One of the most visible effects, with a high impact on migration flows, is the evolution of the labor market.

Labor migration does not only have negative effects, the phenomenon being beneficial for both countries of origin and destination. Between the two categories there is a dissemination of knowledge and modern working methods. Experiences are gained with positive effects on the further development of individuals.

For countries of origin, the effects of migration are positive primarily in the field of social protection by reducing the number of unemployed and creating a balance on the labor market leading to higher wages. The reduction of the labor force deficit is achieved by hiring workers from countries with low living standards, who obtain higher salaries than in their country of origin, depending on their training, skills and respect for work.

The advantage for the countries of origin is also the foreign exchange flow of migrants (even if a large part is destined for immediate consumption), a factor of economic growth, which contributes to reducing the pressure on the current account deficit and their external balance of payments. Two thirds of the money sent to the country comes from Romanians who went to work in Italy and Spain. Money transfers from abroad have the immediate effect of increasing the quality of life of households and families of emigrants. Romania ranks tenth in the world, in a ranking of remittances compiled by the World Bank, and second in the EU (Ailenei, 2009).

The positive effects for economic growth also come from the fact that part of the income from emigrants is saved in the banking system. Temporary labor exports have been shown to be much more efficient than foreign investment. In the situation of company bankruptcies or staff reductions, the labor force is oriented towards lower paid jobs, but stable, becoming “saviors” of the system and factors of economic stabilization (Constantinescu, 2002).

The leadership experience and improved qualifications gained by returnee groups also contribute to the country's economic growth. They transfer know-how and high standards and can become employers for some of their peers. Companies have come to the conclusion that their experience is much more useful than that of foreign employees who have been transferred to their destination countries for a lot of money.

In order to prevent the emigration of specialists, with effects on reducing the technological development, there is a way to motivate them by creating networks between them and those from other countries.

The moderation of salary increases in recent months, so obvious not only in Romania, confirms the temptation to reduce labor costs. At lower incomes of the population, consumption is also reduced, and in the face of diminished demand, the seller makes his products cheaper, be they goods or services. In so-called "economies of scale", the more fixed costs are divided by a greater number of goods and services sold, the higher the productivity.

A well-mastered performance management offers the chance of more advantageous employment in periods of economic slowdown, if the employer has the necessary salary fund.

For economic development, in the country of origin, migrants and their skills could be used by encouraging circular migration. Circular migration would reduce the exodus of "brains" because the absence would be temporary and would offer rewards for returning to the country of origin when he can no longer stay in the country of destination.

Migration has profound economic consequences for countries of origin - many of them useful, others more worrying. Exploring these consequences has become a major focus in the current debate around globalization. In many developing countries, migration is a family strategy that aims not only to improve the prospects of the immigrant, but also those of the family left in the country of origin. In exchange for supporting the move, the family can expect financial remittances when the migrant is settled in the country of destination - transfers that usually far exceed the initial expenses or income that could have been earned in the country of origin. These transfers can in turn be used to finance major investments, but can also be used for immediate consumer needs. Despite these financial rewards, separation is usually a painful decision that involves high emotional costs for both those who move and those who are left behind.

The fact that so many parents, spouses, and partners are willing to bear these costs gives an idea of how great their perception is of the rewards they will receive. Financial remittances are vital in improving the livelihoods of millions of people in developing countries (Constantinescu, 2002). Many empirical studies have confirmed the positive contribution of international remittances to household welfare, nutrition, food, health and living conditions

in places of origin. We note that international migration and the problems arising from it are the focus of international organizations and governments around the world. We are dealing with a disagreement between states that want to protect their internal labor market, on the one hand, and the rights of the individual who chooses to migrate in order to have a decent standard of living.

With regard to migrants' countries of origin, which are considered labor-exporting countries, we list the following positive effects of labor migration (Galgóczi, Leschke and Watt 2011):

- decreasing the pressure of unemployment on the labor market, because the export of labor also presents export of unemployment when the people who go to work abroad did not have a convenient and remunerated job in the country, or, if they were employed, the vacancies can be filled by the remaining unemployed in the country;
- most of the positive effects of migration refer to the effects that materialize in remittances, which have incidences and can be specified by the positive impact on consumption, savings, investments, economic growth and other phenomena through consumption;
- familiarizing migrants with new technologies and technical procedures applied in the destination country,
- migrants 'investments in the country of origin, financed from income from work abroad, made by migrants on return or during the period when they are abroad, made by members of migrants' families;
- foreign direct investments of investors from the countries of destination of migrants, in whose mechanism migrants are involved, etc.

Among the positive effects of remittances, the following are aligned (Galgóczi, Leschke and Watt 2011):

- increase of the incomes of the population of the country of origin, given the fact that a part of the private incomes of the migrant, collected from the work carried out abroad;
- remittances are transferred to the members of his family - citizens of the migrants' state of origin;
- reducing the proportion of people living in poverty and even extreme poverty, by covering the consumption demand of the recipient families. It is important to note that remittance flows are also responsible for reducing rural poverty. We also consider it important to note that external economic migration, with its complex characteristics, contributes in a broad sense to the eradication of poverty according to the concept of human poverty promoted by the United Nations, which analyzes

poverty as a component of income poverty, emphasizing that equity, social inclusion, women's empowerment and respect for human rights are important for poverty reduction.

- covering the consumption demand of the recipient families, the remittances end up being saved, thus leading to the increase of the population's savings. However, for various reasons, mainly for psychological reasons, only a part of the savings ends up being saved in the banking sector.
- exerts a positive influence on the current account of the balance of external payments.

Significant remittance inflows offset the current account deficit of the external balance of payments, thus reducing the likelihood of a balance of payments crisis. The increase of production in the country can be achieved, under the conditions of an active state policy, by investing remittances in the national economy.

However, even in the situation where the additional solvent demand fueled by remittances is covered by imports, the multiplication effect exists, but it spreads in a more specific way, namely: the additional consumption of the population, fueled by imports, leads to increased revenues from imports. indirect taxes in the state budget - import taxes, value added tax, etc. At the same time, the range of negative economic effects of external labor migration on labor-exporting countries is much longer (Lowell, 2003).

The negative effects of external economic migration at the macroeconomic level are determined by:

- migration together with the decrease of the birth rate led to a massive decrease of the population after 1990;
- loss of P.I.B. due to the quantitative reduction of the available labor force in the country. The exercises of decomposing economic growth on the contributions of the factors of production, encountered in most models of economic growth, show that the reduction of labor supply compromises the potential for economic growth;
- the decrease of P.I.B. due to the reduction of the work potential and intellectual resources of the nation, which have a great influence on the level and pace of development of an economy, because it is expressed by the degree of training, scientific research capacity, scientific values, etc. In all labor-exporting states, there is a decrease in the rate of active employment in the total population in the domestic economy, based on the fact that statistics show that over 60% of migrants are between 20 and 40 years old. This includes the decrease of the P.I.B due to the loss

of creativity and neutralization of the work capacity of those who go to work abroad or even the decrease of the competitiveness of the national economy, as a result of the decrease of the qualitative characteristics of the labor resources;

- increasing the cost of labor on the domestic market due to reducing the supply of domestic labor;
- the loss of human and intellectual capital, which emigrated, as well as the non-recovery by the state of investments in human and intellectual capital, achieved through the education system, financed from budgetary sources (state investments in human capital);
- the phenomenon of "exodus of intelligence". Erosion of human capital from a qualitative point of view, by losing the qualification, because migrants are not employed in the destination countries according to the qualification held, because employment in a foreign job is either done in a less qualified position than their professional training obtained in the country of origin, or there is a trend of polarization of jobs occupied by migrant workers. Here we encounter super-qualifications, on the one hand, that "brain drain", and on the other hand, in a very large proportion, those who occupy low-paid, low-skilled jobs, refused by the local labor force, associated with a lack of social protection or one that leaves something to be desired;
- the net loss of income resulting from the undervaluation of the work of emigrants in the destination country;
- the increase of taxation following the decrease of the share of the active population in the total population, because the active population emigrates and, respectively, the taxpayers emigrate, so, in this context, we could talk about an "export of taxpayers";
- disastrous increase in imports. The high propensity to consume of the population, which has experienced a period of poverty, must encourage the strong expansion of the productive sector, but local companies are often too slow to respond to demand signals. As a result, demand is covered by imported goods and services. Imports are growing at a rapid pace, significantly exceeding exports, reaching serious trade deficits;
- the appreciation of the exchange rate of the national currency, which leads to various imbalances in the economy, first of all, to the braking of exports. Normally, the appreciation of the currency must be based on the increase of productivity in the economy, otherwise the unfounded appreciations of the national currency can cause dangerous imbalances, such as deindustrialization or the emergence of various corrective

explosions in the economy national currency;

- the existence of an increased amount of national currency in the economy, injected into circulation, following the interventions of the central bank on the foreign exchange market, as well as the high demand for certain goods (land and houses), leads to artificial increase in their prices and overall fuel inflationary pressures;
- the worsening of the national labor market situation, which is due to the reduction in terms of quantity and quality of the national labor supply.

National labor markets, through their attributes, cannot retain the necessary labor force, being at a disadvantage compared to markets in developed countries, such as the EU, which offer high incomes; the emergence of a ridiculous situation characterized by the parallel existence of a high unemployment rate and uncovered labor demand in most occupational categories, and the slowdown in the formation of a work culture appropriate to the new context - globalization: the remaining population, mostly older, skills work is preserved, and does not adapt to the more efficient Western model. In the case of external migration, the worker's behavior can be shaped by the environment in which he works, adapt to work abroad and can be conservative in the case of work in the domestic labor market. Activities carried out at national level can be streamlined through imposed behaviors. There are also national exceptions, but these are not enough to change the style of work. Significant performance gaps between countries in terms of productivity and technical level will be maintained in the near future.

At the microeconomic level (individual, families, households / households) - for the migrant worker and his family, the effects are diverse, but the balance is positive. The most significant gains at the microeconomic level consist in (Galgóczi, Leschke and Watt 2011):

- the gain of an income, which ensures the reproduction of the labor force of the worker and his family, income that the migrant would not have obtained in the country of origin, due to the much lower level of salaries for the same type of activity or even lack of employment;
- the part of income transferred to the family left in the country - remittances, allows the substantial raising of the living standard of remittance beneficiaries, financially covering their primary needs (for food, consumer goods, improving living conditions, studies, etc.), which contributes to poverty reduction;
- increases the ability to save and invest the population, in durable goods (housing, appliances, agricultural machinery, etc.), or to launch a business. In any situation, investments contribute to the increase of

national wealth and / or to the creation of new jobs;

- increase investments in educating the children of emigrants, with income from abroad, many families get the opportunity to enroll their children in universities and pay tuition fees. Children can, in the future, engage in various sectors of the economy and contribute to the prosperity of the national economy.
- professional earnings, knowledge, skills, behavior, work discipline, work safety. To these are added the qualitative increase in terms of interpersonal relations, civic spirit, involvement in community life.

Labor migration is an important source of income through remittances to family members who have stayed at home. Remittances are important resources that produce mixed effects on the well-being of the population, but also on the country's economy in general. On the one hand, they contribute to poverty reduction and the accumulation of capital that can be turned into investment resources. On the other hand, however, they develop household dependence and promote consumption-based economic growth. This dependence of remittance migrant households leads to a tendency for the working age population to give up being present on the labor market, essentially diminishing the country's chances of economic development.

Recent studies in the field show that, with each year lived by the migrant in the country of destination, in his consciousness there is a change of intentions from temporary to permanent migration (Constantin, Vasile, Preda, and Nicolescu, 2004). This influences the structure and volume of migrant spending, starting to consume more resources for those areas of life that were not a priority in the conditions of a temporary migration. Also, in recent years, there is an intensification of the reintegration trends of Moldovan migrant families, when not only the spouses but also the children and parents of migrants are transferred to live in the host country for permanent emigration. As a result, they have more relatives in the host country than in the country of origin, which changes the frequency and volume of money sent to the country.

3. Conclusions

Instead of a medium-term development, Romania has a long-term migration. In order to reverse the flow, the state needs to outline its strategic lines in such a way as to lead to the creation of diversified jobs in an optimal and relatively balanced economy distributed throughout the country. The extremely fragile base on which the Romanian economy is evolving means that the problem of macroeconomic balance and standard of living will not be solved in the

near future. In the absence of investments by top companies that, through the expansion of turnover and financial flows, to radically change the reality, it will be possible to put an equal sign between the deficit of competitiveness and emigration (Lowell, 2003).

Romania has been and is a country of origin or transit in migration flows. Its entry into the group of EU member states coupled with the increase in revenues will certainly lead to a change in this situation. Taking as an example country like Spain or Italy and more recently Poland, Hungary or Slovakia after joining the EU in 2004, Romania will become both a source and destination country so that the number of emigrants will be exceeded by the number of immigrants (Constantin, Vasile, Preda, and Nicolescu, 2004).

One of the most visible effects, with a high impact on migration flows, is the evolution of the labor market. Both massive labor migration and the aging process are currently affecting labor supply.

At the international level, labor migration is a phenomenon with great potential primarily for the development of developing countries by reducing poverty and increasing investment in human capital. It also poses serious challenges for developed countries that compete to attract immigrants to meet their economic needs.

The aim of EU member states is to effectively manage the migration process of citizens by harmonizing their migration policies.

The current global crisis is creating difficulties for all countries, including EU member states, and unemployment is rising significantly. To overcome this challenge, the EU needs to be united and strong. The measures taken are in the field of stabilizing the banking system and in supporting the economic recovery, aiming first of all at restoring the essential credit channels within the economy. Other measures are to maintain the jobs of citizens of EU Member States through the European Social Fund. The European Commission (2014) is working to reduce the widespread social effects of the crisis through the Globalization Adjustment Fund.

The Lisbon Strategy for Growth and Jobs helps to identify those reforms that will strengthen the growth potential of economies and make them more resilient to global shocks.

The Stability and Growth Pact provides a solid framework for stimulating demand and job creation in the short term, while creating the conditions for maintaining the sound and sustainable nature of public finances in the medium and long term.

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RISK MANAGEMENT IN PUBLIC ENTITIES – MANDATORY ELEMENTS

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Abstract: *In its historical dimension, risk is a young concept while being one of the few business terms with direct origins within the commercial and financial field, and not derived from the military, psychologically or scientifically vocabulary. A general response to the following question: "why is it necessary a risk management?" is induced by the observation which proves that in any organization, or field that this one takes action into exists uncertainties seen as threats in accomplishing the given objectives. Therefore, to implement functional politics of management of risk in the public entities it is necessary to follow some mandatory steps: Understanding the concept of risk by the management of the public entities; Awareness of internal and external factors of risk; Identification of risks which may negatively affect necessary activities for accomplishing the objectives of public entities; Evaluation and ranking of risks; Establishment and implementation of countermeasures of risks; and Periodic evaluation of risk's level.*

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1. What is risk? Concepts regarding risk

The word "risk" is derived from the Italian "risicare" which stands for the verb "to dare". Therefore, *risk is a choice, not a fate* (Spencer Pickett, 2006, pag. 54). From this definition we can understand that we are truly exposed to risks in our daily lives, we have control over them because we can change different variables if we have the time and the necessary inclination.

Generally, risk is a part of every humanly effort. From the moment we leave home to when we are back we are exposed to all kinds of risks. The

significant fact is that on one hand some risks are completely up to us, and on the other hand we create the risks through our daily activities.

We can say that there is a risk in everything we do, in any kind of activity, in every decision we make. These manifest in one way or another, even if we do not want to admit it.

It is wisely recommended to us that we should understand the risks and try to deal with them.

In the present time, there is no unanimously accepted definition of the concept of risk by all specialists in the field. Among the most commonly used definitions are the following:

"Risk represents the possibility of obtaining favorable or unfavorable results in a future action expressed in probabilistic terms."

"The risk is the possibility that a future event will materialize and may cause some losses."

"The risk is the threat that an event or action will negatively affect an organization's ability to meet its objectives."

The following conclusions can be drawn from the analysis of these definitions of risk:

a) Probability versus consequences. While some definitions of risk focus only on the probability of an occurring event, other definitions are more comprehensive, including both the probability of occurrence of the risk and the consequences of the event.

b) Risk and threat. In defining the concept, some specialists put the sign of equality between risk and threat. We specify that a threat is an event with a low probability of manifestation, but with high negative consequences, given that the probability of manifestation is difficult to assess in these cases. A risk is an event with a higher probability of occurrence, for which there is sufficient information to make an assessment of the probability and consequences.

c) Comparing only negative results. Some concepts of risk focus only on adverse events, while others consider all variables, both threats and opportunities.

d) Risk is related to profitability and loss. Obtaining the expected result of an activity is under the influence of random factors, which accompany it in all stages of its development, regardless of the field of activity.

The term “risk” taken singularly is meaningless, as long as it is not supplemented by the type of loss, from which it is calculated (the entity subject to the loss) and the type of conditions or circumstances for which the assessment is made (exposure to danger).

2. Risk Categories

For example, below are the risk categories identified by the English Ministry of Finance (Treasury) to support organizations in verifying that they have considered the full range of risks that may arise:

A. External risks arise from the external environment and cannot be fully controlled by the organization, but for which mitigation measures can be taken, as it follows:

- political
- economical
- socio-cultural
- technological
- legal
- environmental

B. Operational risks are related to the current activities, both the current way of carrying out the activity, and the construction and maintenance of the capacity and capability, respectively:

- related to the development of the activity:
  a) the possibility to provide a product / service
  b) carrying out activities / projects
- related to capacity and capability;
  a) resources (active, human, financial, informational)
  b) relationships
  c) operations (obtaining results)
  c) reputation
- related to the way and capacity of risk management
  a) governance (regularity and fairness)
  b) exploration (ability to identify risks and opportunities)
  c) flexibility and adaptability
  d) security (active, social, informational)

C. Change are the risks related to objectives, strategies and policies, respectively:

- new strategies
- new politicians
- new programs
- new projects

3. Inherent and residual risks

The inherent risk is the risk arising within an entity in the absence of any management actions to change / transform the probability or impact of events.

Residual/remaining risk is the risk that remains after the existing management response has been taken into account. The technology for assessing the two types of risks is the same reason why, previously, reference was made to risk assessment in general and not to the assessment of one type of risk.

The inherent risk and the residual risk are two hypostases of the same risk: before the introduction of an internal control instrument and, respectively, after the introduction of an internal control instrument. Therefore, the inherent risk exposure is a measure of the "amount" of risk to which the organization is exposed if the internal control system does not work, and the residual risk exposure is a measure of the amount of risk remaining after the internal control instruments have been implemented.

The inherent risk, where there is no instrument of internal control, is not the most common case in organizations. They have internal control systems for many risks, even if the situations or events that are kept under control are not perceived (realized) as risks.

Internal control systems can be said to be adequate or not, but it cannot be argued that they do not exist. Because of this, the inherent and residual risk are relative and not absolute.

When the internal control implemented at a given time in the organization in relation to a certain risk results in an exposure to risk exceeding the tolerability limits, the previous residual risk is considered an inherent risk in relation to adjustments and developments of the existing internal control system. The internal control system adjusted and developed to capture changes in circumstances is completed by a new residual risk.

It is important that the response to relevant risks is proportionate to their impact and likelihood of occurrence.Providing a response to a risk is therefore a matter of optimizing risk management and not a simple attempt to eliminate or reduce the risks.

4. Public entities facing typical risks

Reasonable assurance reflects the view that the uncertainty and risk associated with the future cannot be predicted by anyone. In addition, factors beyond the control or influence of the entity, such as policy, may impact the ability to achieve its own objectives. In the public sector, factors beyond the control of the entity may even change major objectives in a short time. An important component of the internal control environment is the senior management of

the institution, significantly influencing the organizational climate. "Top tone" can establish or fatally undermine organizational culture. The independence of senior management from executive management, the experience and quality of members, the degree of involvement and research and the timeliness of activities play a very important role. Executive management may be part of senior management, but for the efficiency of the internal environment, the senior management team must include independent, non-executive members.

The attribution of authority and responsibility implies the level to which individuals and teams are authorized and encouraged to take the initiative to solve problems, while also setting the limits of their authorization. The support of the human resources department on practices related to the employment and promotion of appropriate people, professional training and concern for unsatisfactory performance is required. Management must specify the level of competence for particular tasks and transpose them in the job description for those special positions.

It is necessary to ensure that staff understand the entity's objectives and how their actions contribute to those objectives. Responsibility is as important as authority.

Limitations also result from the following realities: human judgment in making decisions can be imperfect; failures can occur due to human errors such as simple mistakes or deviations; the decisions that must react to the risks and the establishment of the necessary controls to take into account the costs and benefits; controls may be circumvented by secret agreements between two or more persons and management may disregard the control system.

5. The benefits of implementing a functional, efficient and performant system of risk management in public entities

Any manager must pay more attention to threat management because otherwise it jeopardizes the realization of its objectives. Also, a competent manager takes advantage of the opportunities for the benefit of the organization, proving his efficiency. If uncertainty is an everyday reality, then the reaction to uncertainty must also become a permanent concern. By implementing a risk management system, public sector organizations in Romania can achieve the following objectives:

a) making informed decisions;

b) planning the management system based on the hierarchy of specific risks;

c) more efficient allocation and use of available resources;

d) obtaining a high level of transparency of the management and decision-making process;

e) ensuring a greater degree of flexibility for alternative actions, as a result of a better understanding of the sources of risk;

f) compliance with the requirements of the relevant legislation;

g) substantiation of an approach regarding the uncertainty management mode;

h) ensuring a better identification and enhancement of opportunities.

The long-term benefits of these organizations include:

a) ensuring an increased degree of preparation for highlighting the positive consequences;

b) effective strategic planning, as a result of the high level of knowledge and understanding of the key risk exposure factors;

c) reduction of costs, as a result of forecasting undesirable effects and adopting appropriate measures to prevent them;

d) improving the audit processes and increasing the degree of capitalization of the results of internal and external evaluations;

e) better results in terms of efficiency, effectiveness and adequacy of the programs; for example, improved management and better allocation of available resources (human, financial and material);

f) ensuring an efficient communication base between the organizations and the affected / interested parties, in order to formulate the directions and design the priority action programs.

6. Risk management process

One of the most important standards that make up the Code of Internal Control, approved by the O.S.G.G. no.600 / 2018 is the standard regarding risk management (Standard 8).

According to the standard mentioned above, each public entity has the obligation to establish and implement a risk management process that facilitates the efficient and effective achievement of its objectives.

This practice has migrated from the private to the public sector, so that more and more governments in European Union member countries have integrated risk management into public management reforms in recent years.

Risk management is a preventive attitude regarding the elimination or limitation of damages, when there is the possibility of materializing a risk, respectively a process of identifying, analyzing and responding to the potential risks of an organization.

Under these conditions, the role of risk management is to help understanding the risks to which the organization is exposed, so that they can be managed. This role differs depending on when the analysis is performed, as follows:

- if the risk assessment is performed before the risk materializes, the purpose is to avoid the occurrence of the event;

- if the risk assessment is performed after the risk has materialized, the purpose is to ensure the performance of the activities and the continuity of the organization's activities.

The advantage of implementing the risk management system within the organization is to ensure the efficiency and effectiveness of operations. In order to achieve this requirement, the management of the organization has the responsibility to make known the risks it faces and to manage them properly, in order to avoid the consequences, in case of their materialization.

Risk management is the responsibility of the organization's management, and the central objective of this process is to manage risks so that resources are used efficiently and effectively to maximize results and minimize potential threats, while protecting the interests of employees and beneficiaries.

In order to ensure an efficient risk management, it is necessary to create organizational structures adequate to the organization's strategies and policies. In this regard, the organization must adopt appropriate policies in terms of organization, so as to effectively monitor each risk or risk category and in an integrated manner, the entire system of risks that accompanies the activities of the organization.

The policies and strategies that can be adopted in terms of organization are related to:

- establishing and elaborating its own system of norms and procedures, which put into practice to ensure the avoidance or minimization of risks;

- establishing the appropriate functional structure based on a clear design, which must ensure adequate compartments that contribute to the identification and monitoring of risks. Risk management is required because organizations face a multitude of internal and external factors of influence, and the biggest challenge for management is to determine what level of risk it is prepared to accept in carrying out its mission, so as to add value to activities and achieve their goals.

7. Techniques of risks identification

The risk identification process aims to discover all possible sources of risk in order to eliminate or reduce the effects they may produce.

Following the risk identification process, analysts can quantify these risks and establish ways to approach them in order to avoid situations in which the manager or organization is caught by unknown events.

Risk identification can be achieved through several methods such as:

• Internal questions;
• Brainstorming;
• Activity logs;
• Process and flow charts;
• Regular meetings with the staff involved.

Achieving the objectives of integrated risk management within an organization involves the fulfillment, in a logical sequence, of specific and necessary activities, as follows: setting objectives; identifying risks; risk assessment, establishing the risk response; implementation of control measures, information and communication and monitoring.

Once the risks have been identified and assessed and after the tolerance limits have been defined within which the organization is willing, at some point, to take risks, it is necessary to establish the type of risk response for each risk.

The risk response depends on the nature of the risks considered from the perspective of control (control) possibilities.

In fact, it is the answer to the following questions:

• can the risks be controlled by the organization?
• if so, can the organization control the risks to a satisfactory level?
• if not, can the organization outsource the risks or risk-generating activities?

Risk management is a process designed and established by management and implemented by all staff within the entity.

The implementation of an integrated risk management system involves the identification and assessment of risks that threaten the achievement of objectives.

This category includes the risks related to the activities and actions related to the entries, the risks related to the actual processes carried out within the organization, the risks that prevent the achievement of the planned results, as well as the risks related to the impact of activities.

Setting goals is an exclusive task of the institution's senior management. Their source is found in the current activity plans, multiannual planning, attributions and essential functions of the respective institution, the legislation that regulates its operation, orders, methodologies, production plans, procurement programs, etc.

Once the objectives are established, they are transmitted to the line management (heads of services, offices, compartments, similar), their task being to establish the subsequent activities necessary to achieve them, the tasks and responsibilities of subordinates, deadlines.

Execution staff must understand in detail the activities they are to carry out, assume their responsibilities and deadlines. At the same time, it is very useful for them to hierarchically signal the limitations and obstacles encountered in carrying out the established activities, to sensitize the management on the deficiencies and non-conformities identified.

Among the factors that constitute the risk environment and that public institutions must take into account are the following:

a) the legislative framework: the organization must identify those norms under whose incidence it falls; the rules are nothing but constraints that limit the way organizations act (for example, the risk of staff not performing their tasks satisfactorily cannot be fully controlled by internal control tools; the organization must take into account labor law in order not to is exposed to the risk of incurring legal sanctions);

b) political conditions: a factor of the risk environment, especially for public organizations, is the Government itself; public organizations exist to implement the policies of the Government and its ministries; for this reason, the approach of some risks by the leaders of these organizations is often conditioned by political decisions;

c) material and financial resources: in the case of public institutions the material and financial resources are generally limited, so that activities such as modernization of infrastructure, equipment, technology, computer systems, are usually delayed or canceled, the decision-making process is complicated and time consuming.

d) human resources: in the conditions of a less developed economy, the budgetary constraints affect the possibility of public bodies to attract qualified labor force, an internal control tool that would allow to better manage the risk of non-fulfillment of tasks by employees.

The risk management activity cannot be started without identifying the sources of risk. The identification process consists in looking for all the sources generating events that can negatively affect the activity of the organization having at its disposal a series of tools.

In practice, these tools are used either in combination or successively, the main purpose being not to overlook any risk that may affect the proper conduct of the organization's activities.

Once a source of risk has been identified, it must be analyzed, the probability of generating a risk event and the impact that this event may have must be established.

Depending on the values thus determined, a hierarchy of risks will be made, following that those at the top of the ranking will pay immediate attention to the proper management so that the consequences of their manifestation are diminished and eliminated as much as possible.

The risk assessment process involves taking into account the following characteristics:

- the probability of materialization of the risk is determined by the fact that, at a certain moment, in carrying out the activities, there may be conditions that favor the occurrence of the risk. Under these conditions, the analysis of the causes that favored the appearance of the risk can lead to an appreciation of the chances of its materialization;

- the impact of the risk on the objectives, represents the consequence of the materialization of the risk, respectively how the achievement of the objective is affected by the risk that has manifested itself.

8. Risk control and monitoring

Risk control is the policies, procedures, controls and other practices established by the organization's management for prudent risk management, as well as for ensuring the performance of activities as provided. Also, the purpose of risk control is to ensure the management of the institution that the set objectives are met and the significant risks are properly managed.

The management of the institution, depending on the risk assessment, will establish the risk response. In order to avoid conflicts, it is advisable to ensure an independence of risk control from the functional structures of the organization performing the activities in which the risk is identified. Any measures taken to control the risks must be included in the well-known "internal control system", for which the management of the organization is responsible for implementation.

Risk control assumes that, at the level of the functional structure where the risk exists, the continuous monitoring of the risks and the appropriate attenuation of the probability of materialization or of the risk impact are performed. Otherwise, the risks are uncontrollable and there are no ways to intervene to limit the likelihood and impact of the risk. Risk monitoring involves reviewing them and monitoring whether the risk profile changes as a result of the implementation of internal control instruments.

Review processes are implemented to examine whether: the risks persist; new risks have arisen; the impact and likelihood of risks have changed; the internal control instruments put in place are effective or certain risks need to be redefined.

Risk monitoring involves following the knowledge of the strategies applied for risk management, the ways of their implementation and the evaluation of the performances obtained after the implementation.

Risk sensitive areas are continuously monitored and the results are transmitted at the initial stage in order to re-evaluate, identify and implement appropriate internal control tools or apply other means to reduce risk exposure.

Delays in dealing with risk can diminish the chances of effective risk management in the future. Therefore, the application of the permanent risk monitoring strategy must be preceded by a serious analysis of the duration of the implementation of risk management measures.

If this duration is long, it is preferable that the time of onset of risk management is not delayed. Such an analysis must be subject to risks with a low probability of occurrence, but with a high impact if the affected objectives are of a strategic nature.

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