

DOI: 10.7251/EMC16093B

Datum prijema rada: 1. oktobar 2015.

Datum prihvatanja rada: 1. jun 2016.

UDK: 005.334

Časopis za ekonomiju i tržišne komunikacije

Godina VI • broj I

str. 93-108

STRUČNI RAD

## CUSTOMS RISK MANAGEMENT – TIME OF DECLARATION PROCESSING BY CONTROL CHANNELS

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**Abstract:** *Dealing with a large scope of turnover across the borders, Customs authorities should balance the level of controls and interventions, on the one, and the time and costs related to declaration processing, on the other hand. Modern customs control systems should be based on selectivity approach and risk management.*

*Risk management as a new approach in organizing and controlling Customs activities, is a complex process which starts with identification, analyzing and evaluation of possible risks, and continues with treating of selected risks by adoption of risk indicators and profiles.*

*The main goal of this paper is to analyze the importance of risk management approach for straightening Customs performance quality, with special emphasize on the time of processing of import declaration. Using statistical methods, calculations will be made on the impact of selected control channel for customs clearance on the time on import declaration processing. The results of this research will indicate the expectations on the time for import declarations processing when using different customs control channels.*

**Key words:** CRM, risk management, processing time, customs declaration, customs channels,

**JEL:** F13, F14, F19

### INTRODUCTION

The rapid growth in international trade and limited resources of Customs administrations are the main determinations that affect the methods used in customs

control. Controlling every item upon arrival at customs border has become a barrier to trade (Biljan and Trajkov, 2012). Therefore, modern customs control systems should be based on selectivity approach and risk management.

As risk-based management concept is applicable in almost every business and governmental area, there is a lot of experience that could be shared with Customs issue. From Customs point of view, risks include the potentials for non-compliance with Customs law such as licensing requirements, valuation provisions, rules of origin, duty exemptions regimes, trade restrictions, and security regulations, as well as the potential failure to facilitate international trade (World Customs Organisation, 2003). Risk management as systematic identification and implementation of all measures necessary to limit exposure to customs risk, determines which persons, goods, and means of transport should be examined and to what extent (World Bank, 2005). The high-risk persons, goods and means of transport are subject of high-level controls and interventions; despite of low-risk ones that receive high-level trade facilitation. Only risk management approach can ensure compliance with Customs regulations in a way to ensure trade facilitation.

By identifying, analyzing, evaluating and treating risks, Customs manages everyday activities that significantly improve its performance. Through applying risk management, Customs aims to improve decision making and minimise impact of risk events on operational activities.

This paper deals with the Macedonian Customs experience on implementation of risk management system in regard to reduction of time of processing of import declaration by customs control channels. Despite of introduction, the paper is structured in four sections. The first section is dedicated to literature review and the second one is dedicated to implementation of risk management process in the Customs Administration of the Republic of Macedonia. The share and dynamics of import declaration routed to one of the customs control channels as one of the most implemented tool of selectivity are analyzed in the third section. The fourth section is dedicated to the analysis of the time of processing import declaration in the customs practice in the Republic of Macedonia. At the end, the concluded remarks are noted.

## **LITERATURE REVIEW**

Customs modernization process helps customs administrations in their reforming process aimed to face new challenges in increasingly globalised environment, on

one, and to reduce the time of processing of import declaration by customs control channels, on the other hand.

Biljan and Trajkov (2012) emphasize that the main dilemma in Customs management, especially during the last two decades, is balancing the needs for trade facilitation as a process of simplification, standardization and unification of documents and procedures in international supply chain, on the one, and the level of controls and interventions, on the other hand. Dealing with this dilemma, Customs significantly changed its role and position in the international supply chain. Mainly, Customs replaced its gatekeeper's role, with the new modernized, complex and very sophisticated CRM approach. The main characteristic of CRM approach is determining which persons, goods, and means of transport should be examined and to what extent. High-risk persons, goods and means of transport are subject of high-level controls and interventions; despite of low-risk ones that receive high-level trade facilitation (UNCTAD, 2008).

Widdowson (2005) concludes that effective CRM is central to modern customs operations, which provides the means to achieve an appropriate balance between trade facilitation and regulatory control. Additionally, he concludes that the principles of CRM can be applied manually or automatically by all administrations, but one of the most important elements is gaining a clear understanding of the nature of risks.

One of the most significant research on essential components and the state-of-play regarding CRM on global scale today, on the differentiates among administrations located in high GDP per capita versus low GDP per capita regions / countries, and on the possibilities of CRM improvements on both strategic and operational levels, was performed by Hintsa, Männistö, Hameri, Thibedeau, Sahlstedt, Tsikolenko, Finger and Granqvist (2011). Regarding the answers from the conducted survey on CRM in 24 customs administrations, they have drawn two conclusions: *firstly*, all 24 administrations in the survey had at least some of the CRM elements understood and implemented, but, no administration appears to have CRM as a masterpiece of their management systems, neither on strategic nor on operational level, and *secondly*, Customs operating in less developed economies perceive the benefit potential as lower and obstacles as higher than their counterparts in the wealthier nations. Limited efforts to manage human resources, and lack of CRM tools and data feeding into CRM processes are key examples where the administrations in poorer countries are falling behind today.

Additionally, there are papers that deal with the impact of time on trade effects. The positive impact of time delay reductions on business sector is argued by Djankov, Freund and Cong (2008), who concluded that a 10 percent reduction in delays increases exports by about 4 percent, all else equal.

The reduction of the delays in Customs time in import and export could be calculated as tariff equivalents that would express the impact of the delay reduction in terms of tariff liberalization (Hummels, 2007). Biljan (2014) argued that the reduction of customs import time from 3 to 1 day implied tariff equivalent reduction from 2.7 percent to 0.9 percent, and the reduction of customs export time from 3 to 1 day implied tariff equivalent reduction from 2.1 percent to 0.7 percent. In terms of export that means that the customs time reduction in export has the same effects as reduction of tariffs that Macedonian exporters face at the international markets. That is another argument for the positive effects of customs modernization and CRM on business in the Macedonian economic environment.

## **RISK MANAGEMENT PROCESS IN THE MACEDONIAN CUSTOMS ADMINISTRATION**

The Customs Administration of the Republic of Macedonia (CARM) as a legal enforcement entity operating within the framework of the Ministry of Finance is involved in all international modernization processes related to trade facilitation and efforts to ensure duty collection and social security and safety. In the last ten-year period, it has implemented contemporary improvements and developments in standardization and harmonisation of customs procedures and management systems. The Republic of Macedonia acceded to the International **Convention** on the Simplification and Harmonization of Customs Procedures, known as Revised Kyoto Convention (CARM, 2010), and harmonizes its national customs system with the EU one, as a highly modernized customs system today. Furthermore, the Republic of Macedonia has built up a systematic network of national legal provisions for establishment and development of risk management system.

The risk management process, as the systematic identification and implementation of all measures necessary to limit exposure to risk, consists of several procedures that Customs administrations should put through: risks identification; risk assessment that is consisted of risk analyses and risk evaluation; risk treatment; monitoring and reviewing, and communication and consultation within national Customs administrations, C2C (Customs to Customs) and C2B (Customs to Business) (WCO, 2003).

The process of establishment of customs risk management starts with defining of the risk management context, which is treated on strategic, operational and tactical level:

- Strategic risk management identifies areas of risk, sifts out those of minor importance, and intervenes only where experienced and practical judgment indicates it is necessary;
- Operational risk management determines the level of control necessary to deal effectively with the assessed risk, and
- Tactical risk management is used by officers at their workplace in dealing with immediate situations to decide which movements require greater controls.

The risk management process is very complex and dynamic, and its activities are highly interdependent and mixed, as well. Also, it is a process under continually monitoring and controls which as a feedback, reveals necessities for permanent improvement and development.

In the CARM, as in all Customs administrations over the world, risk management practices had started as “risk analysis” applications. This modest start was focused primarily on improving customs inspection capabilities by moving the system from “randomly selected” or “assumption of everything controlled” approach to more “smart” and “selective” method using predetermined risk indicators and profiles (Bicimseven, 2010). The first step in implementation of risk management in the CARM was done in 2002 when the application of the selectivity control method, as pilot programme in some Customs offices, started (CARM, 2006). After that it was accepted as general policy in all Customs offices. Additionally, the Risk Analysis Department (RAD), as an organizational unit within the framework of the Sector of Controls and Investigation in the CARM, was established. The tasks of this unit are: to analyse, evaluate, identify and define customs risks, risk indicators and risk profiles; to purpose them for adoption; to monitor the risk management activities and to coordinate the activities on different levels; to control the fulfilment of measures and procedures in the field of risk management; to revise and update the defined customs risks, risk indicators and risk profiles.

The traditional approach of risk management could be related only to operational and tactical level, but it had very little to do with overall strategic objectives of customs administrations. In the process of implementation of modern risk management approach which includes strategic dimension, CARM along with the imposition of risk management approach in the national Customs legisla-

on, has adopted appropriate strategic documents, as well as has developed and amended several operational and tactical documents. In this context, the CARM has adopted the risk management strategies for 2006-2010 and 2011-2014 periods (CARM, 2010).

The Risk Management Strategy 2011-2014, which is based on the provisions of the EU Risk Management Standards Framework, the EU Customs Blueprints – Pathways to modern Customs and the Macedonian Strategic Plan of Customs Administration 2009-2011, sets out strategic goals and commitments in relation to managing and points out the key activities for efficiency improvements.

Two main risk areas are defined in the documents on selectivity controls in customs operations adopted by the CARM (CARM, 2008). They are customs frauds and threats on social safety and security.

Customs frauds, as evading payment of tariffs and other duties, are treated through: declaring and accepting improper customs value; declaring and accepting misclassification; declaring and accepting improper origin of goods; discharging of import for processing; discharging of outward processing; illicit removal of goods from customs supervision; and undeclared import goods for customs clearance, are one of the most important and highly recognized risks in Customs management strategies worldwide.

Threats on social safety and security in terms of public health, environment and consumers, including proper implementation of measures related to import and export of goods to and from Macedonia, as a risk area is regarded to: smuggling of weapons; smuggling of drugs and precursors; money laundering and terrorist financing; smuggling endangered animal and plant species; smuggling of nuclear and radioactive material; smuggling of high technology and weapons; illicit trade in dual-use goods; smuggling of cultural heritage; trafficking in counterfeit / pirated goods; ecological crime, and human traffics.

Determined risk areas, along with the information from different sources (IT system for processing declaration; internal detailed records from different related units within Customs Administration; information from external governmental institutions; international customs cooperation), are the main basis for *identification of risks*. Based on the obtained information, the RAD *analyzes* each identified risk in terms of probability of risk occurrence and consequences of the risk occurrence. The level of risk is determined as high, medium or low as the combinations presented in Table 1.

**Table 1.** Likelihood and consequences of risk occurrence

Likelihood	Consequences				
	Extreme	Big	Medium	Small	Insignificant
Almost certainly	high	High	high	Middle	middle
Likely	high	High	middle	Middle	low
Middle	high	middle	middle	Low	low
Small	middle	middle	low	Low	low
Rare	middle	middle	low	Low	low

**Source: WCO** Risk Management Guide, World Customs Organization, 2003

After the *risk evaluation*, which determines whether identified and analysed risk is acceptable, the next step is the *risk treatment*. Risk treatment is an activity for determination of different risk indicators and risk profiles. A long list of risk indicators is determined in CARM. For example, they are different kinds of goods; traders; tariff lines; prices; currencies; values, country of origin; country of destination, etc.

Additionally, the RAD prepares risk profiles in documentary or electronic form containing following data: risk area; risk indicators; risk assessment and sources of information; parameters of selectivity; treatment - information that requires action to be taken to deal with the identified risks, as well as feedback information from the organizational units that treat certain risk to the RAD, which include: the date when action is taken, results of the action taken and assessment of the action taken.

The risk profile information is used as the basis for selection criteria. Consequently, declarations and supported documents processed by Customs are compared against the risk profile information. The decision on control channels' routing is made according to the matched information. In CARM, the comparison and routing of consignments, vehicles, goods and persons on different control channel are automatically performed by the ASYCUDA (Automated System for Customs Data) system. Also, rerouting of the control channel could be done by the Customs officers.

Risk management is not a static process, but it is a dynamic one and it is a subject of updating and improvements. Once a year, the RAD is obliged to revise, amend and purpose changes in defined risk indicators and risk profiles, as well as to analyse the achieved results from *monitoring and reviewing* and if it is necessary, to initiate changes of risk levels.

The CARM in continuation builds up effective systems for *communication and consultation* among involved internal units, C2C and C2B relations. The effectiveness of this system depends on developing and implementation of clean channels within management information systems as the determinant for accurate, relevant and quick information flows (Iordace and Voiculet, 2007). The CARM, itself and along with other institutions, has developed and implemented several IT solutions as a risk management support tools: National Customs Valuation Data Base; South-East European Messaging System – SEMS; Systematic Electronic Exchange of Data – SEES; Transit of Foreign Currency, securities and Precious Metals; Dual Use Goods Reporting – TRACKER. The main activity in risk management undertook by Western Balkans and the EU is developing and implementation of IT network called Risk Assessment for Customs in Western Balkans – RACWeB. RACWeB is designed to enhance the identification of risk profiles through the utilisation of data mining techniques and to develop an advanced web-based risk assessment service in customs declarations. Its implementation will improve customs efficiency, as well as transparency in everyday activities.

## RISK MANAGEMENT AND CUSTOMS CONTROL CHANNELS

The implemented and developed risk management system and the successful application of selectivity method are closely interdependent and highly interconnected processes. One of the most applied selectivity techniques is the establishment of Customs control channels (Table 2).

**Table 2.** Customs control channels

Green channel	no control (immediate release without examination)
Yellow channel	documentary control
Red channel	documentary and physical control
Blue channel	control at a later stage (post-clearance audit)

According to the previously established risk indicators and risk profiles, goods, vehicles and persons are routed to one of the channels. Automatically, the IT system determines whether they will be declared on green, red, yellow or blue channel. Customs officer will reroute customs declaration within pre-established channel, if he/she has a reasonable doubt that the goods, vehicles and persons must be examined.

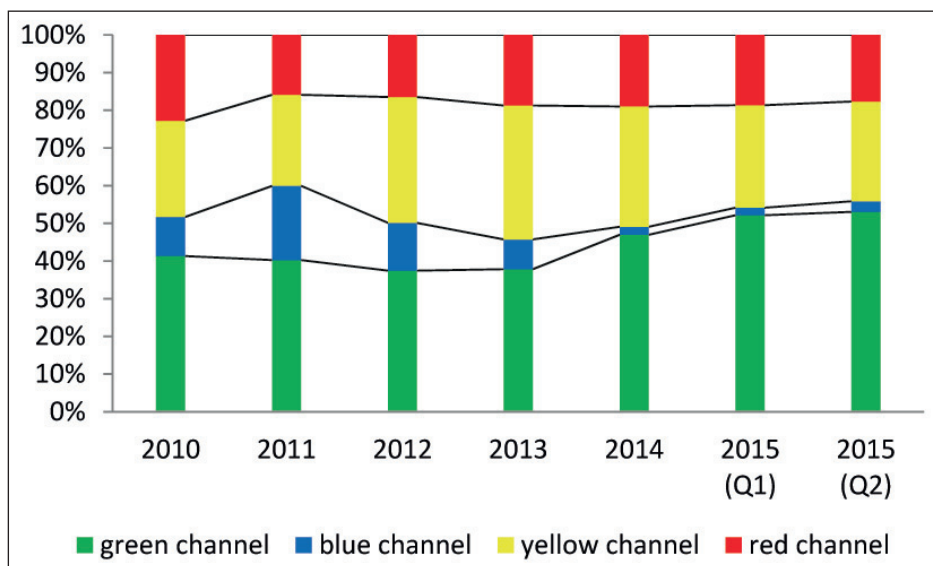
The Macedonian Customs started to apply selectivity method based on control



channels in 2002. The automated selectivity system of control channels was established in 2004.

The most frequently used IT software package for implementation of Customs control channels using risk management is known as ASYCUDA. After long time of application in the Macedonian Customs, ASYCUDA was replaced by new Customs declaration processing software - CDPS, which is compatible for interconnection with the EU customs systems. This software package introduces: electronic processing of declarations for import, export and transit, additional sub-systems and revenue collection functionalities, guarantees, risk-analysis, authorizations, customs tariff, as well as sub-systems for management of laboratory, excise, intellectual property, knowledge base and e-learning.

**Figure 1.** Distribution of import customs declarations by different control channels (%)



Source: [www.customs.gov.mk](http://www.customs.gov.mk)

According to the presented data (Fig. 1), the distribution of the import declaration on different control channels is improved in 2014 related to 2010:

- The distribution of import declarations to green channel, as channel with no controls has been increased significantly, from 41 percent in 2010 to 47 percent in 2014. On the green control channel has routed more than a half of total processed import declarations in the first six months in 2015 (52% in Q1, and 53% in Q2);
- The distribution of import declarations to blue channel that supposes post-

clearance audit has been decreased significantly, from 10 percent in 2010 to 2 percent in 2014;

- The percentage of import declaration directed to yellow channel that means that consignments are subject of only documentary control increased from 26 percent in 2010 to 32 percent 2014. In the first six mounts of 2015, the share of processed import customs declarations routed to yellow channel has decreased to 27% in Q1 and 26% in Q2, and
- The distribution to the red channel, where consignments are subject of document verification and physical control, decreased from 23 percent in 2010 to 19 percent in 2014 and to 18% in second quarter of 2015.

The number of processed import declaration has been increased yearly in the analysed period, except in 2013 (Table 3). In 2014, the number of processed import declarations has grown for 7.72% according to 2013. Analytically, the realized growth is a result of the significant growth of the number of processed import declarations on green customs control channel (33.74%), and the high percent of decrease of the number of processed import declaration at blue channel (71.08%).

**Table 3.** Dynamics of processed import declaration by Customs control channels in the Republic of Macedonia (2010-2014)

	annual growth rate of number of processed import declaration (%)				
	green channel	blue channel	yellow channel	red channel	total
<b>2010</b>	-	-	-	-	-
<b>2011</b>	2.45	99.35	-0.52	-26.60	5.12
<b>2012</b>	-4.43	-33.77	41.95	6.36	2.73
<b>2013</b>	0.71	-37.73	6.11	13.53	-0.24
<b>2014</b>	33.74	-71.08	-3.23	9.25	7.72
<b>2015 (Q1)</b>					
<b>2015 (Q2)</b>					

**Source:** www.customs.gov.mk, own calculations

Presented data on distribution and dynamics of import declarations to different channels indicates that Macedonian Customs has permanently improved its risk management system as a facilitation tool for legal trade, on one hand, and as a control mechanism towards law compliance, on the other hand. But, the significant changes in the same data, indicates that the import risk criteria and indicators are subject of permanent revision and changes.

## TIME OF PROCESSING IMPORT DECLARATION BY CUSTOMS CONTROL CHANNELS

According to the Macedonian Customs statistics, the average time of processing import declaration is defined as a time difference between the time of setting and the time of registration of import customs declaration (Table 4).

**Table 4.** Average time of processing import declaration by customs control channels (min)

Average time of processing import declaration by channel (in minutes)					
Period	green	blue	Yellow	Red	total average
2015 (Q1)	33	21	100	197	88
2015 (Q2)	28	10	97	203	85
2014	33	15	103	213	91
2013	37	34	103	211	96
2012	36	35	101	206	95
2011	31	32	136	227	107
2010	26	24	91	298	110

**Source:** [www.customs.gov.mk](http://www.customs.gov.mk)

The average time of processing import declarations on the green channel in the analyzed period is 32 minutes. Import declarations on the blue channel are processed in a shortest time compared to other channels. Only 24 minutes in average are needed to process declarations on this channel. The average time of processing import declarations on the yellow channel is calculated to 1 hour and 24 minutes. As expected, import declarations processing on the red channel is longest as 3 hours and 24 minutes in average are needed to process declarations on this channel (Table 5). These calculations indicate that when customs authorities practice post clearance audit or the goods are immediately released without examination, time of declaration processing is several time lower compared to the import clearance with documentary control or both documentary and physical control.

The analysis of the asymmetry and deviation from a normal distribution is done with the calculation of the Skewness indicator. The calculation of Skewness of the green and blue channel shows values less than 0. It indicates that most of the values in the analyzed period are concentrated on the right side of the mean or have higher values of the mean with extreme values to the left.

**Table 5.** Calculating descriptive statistics of processing of import declarations by channels

	Green	Blue	Yellow	Red	total average
<b>Mean (<math>\mu</math>)</b>	32	24.42857	104.4286	222.1429	<b>96</b>
<b>Std. Err.</b>	1.511858	3.683019	5.493967	13.1338	<b>3.540581</b>
<b>Median (Md)</b>	33	24	101	211	<b>95</b>
<b>Mode (Mo)</b>	33	n.a	103	n.a	n.a
<b>Std. Dev.</b>	4	9.744351	14.53567	34.74876	<b>9.367497</b>
<b>Sam. Var.</b>	16	94.95238	211.2857	1207.476	<b>87.75</b>
<b>Kurtosis</b>	-0.95938	-1.48953	5.363197	5.398261	<b>-1.01238</b>
<b>Skewness</b>	-0.32813	-0.35055	2.165636	2.265338	<b>0.551108</b>
<b>Range</b>	11	25	45	101	<b>25.25</b>
<b>Max.</b>	37	35	136	298	<b>110</b>
<b>Min.</b>	26	10	91	197	<b>85</b>
<b>Sum</b>	224	171	731	1555	<b>670</b>
<b>Count</b>	7	7	7	7	<b>7</b>
<b>Geom. Mean</b>	31.77946	22.4552	103.6624	220.1285	95.36528
<b>Harm. Mean</b>	31.5536	20.27895	102.9871	218.3966	<b>94.98963</b>
<b>AAD</b>	3.142857	7.918367	9.020408	23.06122	<b>7.214286</b>
<b>MAD</b>	3	9	2	8	<b>6.75</b>
<b>IQR</b>	5	15	4.5	15.5	<b>12</b>

Kurtosis is calculated to determine the flatterness of the distributions. The values of Kurtosis of the green and blue channel indicate that the probability for extreme values is less than a normal distribution and the values are wider spread around the mean. Using these indicators it can be concluded that the average time of processing import declarations on green and blue channel is reliable and there is a certain probability some of the import declaration to be processed in significantly shorter time than the average time of processing. It means that the time of declaration processing on these two channels can be furthermore improved.

Standard error of the average time of processing import declarations on these two channels does not have high values. The aberration of the average time of processing of import declarations on the green channel is 1 minute and 30 seconds and the aberration of the average time of processing of import declarations on the blue channel is higher as expected or 3 minutes and 41 seconds.

The value of the standard deviation indicates the average variability of the time

of processing form one to another import declaration. The variation of the processing time between declarations is much smaller on the green channel (4 minutes) compared to the blue channel (10 minutes) which is expected according previously calculated and interpreted indicators. Data given in Table 4 illustrate that the time variability between declaration processing on the blue channel refers to significant improvement of the processing time in the last year and a half. Similar values in terms of the average time of processing of import declarations by channel are calculated for average absolute deviation (AAD) and median absolute deviation (MAD) of the processing time of import declarations. These indicators ordinarily have lower values than the standard deviation.

Calculations on Kurtosis on yellow and red channels indicate higher probability for extreme values concerning the time of processing of import declarations. Skewness indicator points that extreme values are on the right side of the mean so there is high probability that some of the import declarations to be processed significantly longer than the average time of processing on these channels.

Standard error or variation of the average time of processing of import declaration is higher on the red channel compared to the yellow. Standard deviation of the time of processing of import declarations on the red and yellow channels is much higher compared to the average variability of the time of processing of declarations on the green and blue channel. The variation of the processing time between declarations is 14.5 minutes on the yellow channel and 35 minutes on the red channel.

According to the results of the analyses, the following could be concluded:

- Average time of processing of import declarations is significantly faster on the green and the blue channel compared to the yellow and particularly the red channel.
- The lowest variability of the processing time is on the green channel which indicates that the average time of declaration processing refers to most of the processed declarations and there is only slight probability of extreme values in time of import declaration processing. Even if extreme values are possible, they are directed towards improvement of the time of import declaration processing. There is a similar situation on the blue channel where the time of processing of import declarations, particularly in the last period, is considerably improved, and there is a reduced possibility of extreme values of the time of declarations processing. Also, any extreme values are expected to improve the time of declarations processing on the blue channel. So when customs

authorities practice post clearance audit or the goods are immediately released without examination, the expectations on the declaration processing time are close to the average time of processing. There is a small possibility certain declarations to be processed in a shorter time.

- There is higher variability of the processing time of import declarations on the yellow and red control. Also, there is stronger probability for variation of the processing time of import declaration on the yellow and red channel. Extreme values on the declaration processing time on these two channels are usually higher than the average time of processing. All these considerations lead to a conclusion that when customs authorities clear the goods with documentary or both, documentary and physical control, there is a high probability certain declarations to be processed significantly longer than the average time of declaration processing on the yellow or red channel,
- Selecting green and blue channel for customs clearance has a significant impact on accelerating the time for declaration processing and expedites the movement of goods.

The CARM achieved positive trends, particularly in rise in the number of processed import customs declarations, and a reduction in time delays, due to permanent increase of the share of routed consignments to green customs control channel.

## CONCLUSION

Risk management as systematic identification and implementation of all measures necessary to limit exposure to customs risk, can ensure compliance with Customs regulations in a way to ensure trade facilitation. By identifying, analyzing, evaluating and treating risks, Customs significantly improve its performance.

The new Macedonian Customs Law imposed in 2005 and amended in 2008-2010, have significant positive effects on the development of risk management system in the CARM. According to the law provisions, CARM has developed a modern risk management system on strategic, tactical and operational level. Through determination of customs frauds and threats on social security and safety as risk areas, a large number of risks are identified. After that, identified risks have been analysed, evaluated and treated, and only a part of them are incorporated in risk profiles and indicators. The defined risk profiles and appropriate indicators are used as selectivity criteria in Macedonian Customs control system.

In the analyzed period, CARM achieved positive trends, particularly in: rise in the number of processed import customs declarations, and a reduction in time delays, due to permanent increase of the share of routed consignments to green customs control channel.

## BIBLIOGRAPHY

- Bicimseven, B. (2010). "Organization Wide Customs Risk Management within the Framework of Enterprise Risk Management". The 2nd International Conference on Logistics and Transport & The 1st International Conference on Business and Economics Rydges Lakeland Resort Queenstown, Queenstown, New Zealand Theme: *Managing Risk and Finance in Global Supply Chain*, pp.1
- Biljan, J. (2014). "Good governance in Customs: the case of the Republic of Macedonia" in *Corporate governance: an international perspective*. Ed. Kiymet Caliurt and Idowu Samuel. Springer. 101-115
- Biljan, J., and Trajkov, A. (2012). "Risk management and Customs performance improvements: The case of the Republic of Macedonia." *Procedia - Social and Behavioral Sciences*. Vol. 44 (2012): (301 – 313).
- Biljanoska, J. (2011). "Risk Management in Prevention and Detection of Customs Fraud in the Republic of Macedonia." *Paper proceeding: 3rd International Conference on Governance Fraud Ethics and Social Responsibility*. Kapadokya. Turkey. pp.175-190
- CARM. (2006). *Annual Report 2005*. Macedonian Customs Administration, Skopje.
- CARM. (2008). *Instructions on selectivity controls in Customs*, Macedonian Customs Administration. Skopje. pp.2
- CARM. (2010). *Report on the Activities of the Customs Administration of the Republic of Macedonia in 2009*. Macedonian Customs Administration, Skopje: pp.64
- CARM. (2011). *Risk Management Strategy (2011-2014)*, Macedonian Customs Administration. Skopje.
- Djankov, S., Caroline, F., and Cong, S.P. (2008). "Trading on Time". The World Bank. pp.11, Retrieved from
- Hintsä, J., Männistö, T., Hameri A.P., Thibedeau C., Sahlstedt, J., Tsikolenko, V., Finger M. & Granqvist M. (2011). *Customs Risk Management (CRiM): A Survey of 24 WCO Member Administrations*. Cross-Border Research Association, EPFL & HEC UNIL. Lausanne. Switzerland.
- [http://incu.org/docs/WCO\\_PICARD\\_Professional\\_Standards.pdf](http://incu.org/docs/WCO_PICARD_Professional_Standards.pdf)
- <http://www.doingbusiness.org/~media/fpdkm/doing%20business/documents/methodology/supporting-papers/db-methodology-trading-on-time.pdf>
- [http://www.nathaninc.com/sites/default/files/Calculating\\_Tariff\\_Equivalents\\_for\\_Time\\_in\\_Trade.pdf](http://www.nathaninc.com/sites/default/files/Calculating_Tariff_Equivalents_for_Time_in_Trade.pdf)
- <http://www.sciencedirect.com/science/journal/18770428/44>

- Hummels, D. (2007). "Calculating Tariff Equivalents for Time in Trade" in *USAID Report*, Retrieved from
- Iordace, E., Alina, V.V. (2007). "Customs Risk Management in the European Union". *The Romanian Economic Journal*, Year X, No 25: 6
- The World Bank Group. (2011). *Doing Business 2011*. The World Bank Group
- The World Bank. (2005). *Customs Modernization Handbook*. The World Bank. pp.91
- The World Bank. (2007). *Connecting to Compete: Trade Logistics in the Global Economy 2007*. The World Bank
- The World Bank. (2010). *Connecting to Compete: Trade Logistics in the Global Economy 2010*. The World Bank
- UNCTAD. (2008). Risk management in Customs procedures. Trust Fund on Trade Facilitation Negotiations, *Technical Note* No.12.
- WCO. (1999). *International Convention on the Simplification and Harmonization of Customs Procedures*. World Customs Organization. Standard 6.4.
- WCO. (2003). *Risk Management Guide*. World Customs Organization
- WCO. (2008). *PICARD Professional Standards*, D/2008/0448/4, World Customs Organization, pp.16, Retrieved from
- WCO. (2011). "An Overview of Performance Measurement in Customs Administrations". World Customs Organization. *Research Paper*. No 13
- Widdowson, D. (2005). "Managing Risk in the Customs Context". De Wulf, L. & Sokol, J. 2005. *Customs Modernization Handbook*. World Bank. Washington D.C.