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Degree program in Business Logistics

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Risk Management in Transportation (Case: Truck Transportation from Finland to  
Russia)

Bachelor's Thesis 2014

## ABSTRACT

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Risk Management in Transportation (Case: Truck  
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Bachelor's Thesis

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transportation, trucks, risks, risk management

This thesis research is a student's graduation work. Several objectives were set and achieved in the thesis. Research consisted of introduction part, theoretical part, practical part with empirical results and conclusion.

The objectives of the study were the following: point out the risks in transportation by trucks, find out how logistics companies handle risks, categorize risks and finally make recommendations for further work of logistics companies.

The framework was constructed by searching, analyzing and reading different articles, materials, scientific magazines to collect information on the risks in truck transportation.

In the practical part there were results based on the interviews that were done with CEO of Avind International OY and Omega-Trans OY. Finally, conclusion was written with recommendations for further work of transport companies.

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## 1. Introduction

In old year's Finland was part of Russia and all the trade relations were inside one country. Things have changed. Since then Finland and Russia are close partners in international trade. Trade is vital and effective for both countries.

Figure 1 below shows foreign trade of Finland by countries.

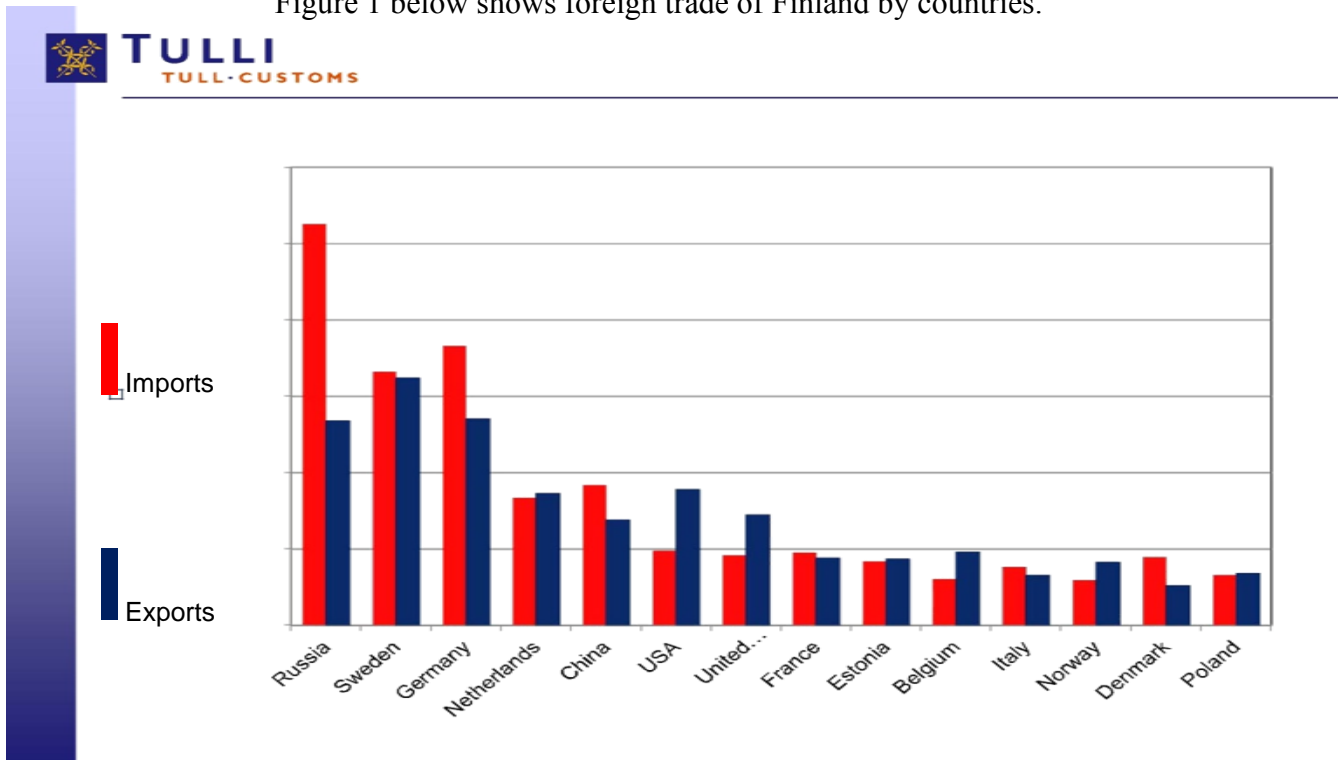


Figure 1 (Tulli customs 2014)

Here one can see that Russia is the biggest trade partner of their neighbor – Finland. Also one can add that the most import comes from Russia. Export to Russia is also quite high. Such a trade is very beneficial for both sides. (Tulli customs, 2014)

This research included such area as risk management in truck transportation between Finland and Russia. The focus of the study was on possible risks and challenges that occur in transportation. The practical part consists of the information about risk neutralization, control and reduction of risks by the logistics companies in a real working environment.

This study is divided into four parts: background information on the field of thesis, theoretical part, practical part that consists of risk neutralization, control and conclusion with references.

In the first part the general info regarding logistics are as well as the explanation why this research is needed, what are the concepts and terms that are in this research work. In second part the focus is on such topics as truck transportation, transit traffic followed by the description of challenges and risks that happen at customs and throughout whole delivery process. Also Incoterms will be mentioned. Moreover qualitative method will help to get the data that will be analyzed and presented in third part. In the third part will be explanation of empirical results got by interviewing CEOs of the local companies: how they manage and neutralize risks. In the final part conclusions will be done according to the info obtained throughout the research and the risks will be classified.

### 1.1 Importance of this research nowadays

This research is significantly relevant to companies and can help to save great deal of money, time and resources. It is highly important for international companies and industries to be aware of problems that can occur and develop possible solutions as well as precaution measures to i.e. decrease risk or tolerate it.

In after - crisis times it is so important to care about business. While making logistics many risks occur. They are different: some of them are of the high importance some of them are of the low one. In any business there are a lot of them. But every possible risk should be counted. The risk reduction depends on the different factors as well as on the type of risk.

For the efficient risk management one thing should be clarified – risk. It is highly important to understand what risk is and how to manage it( define risk, reduce impact, consequences).

Risk means the possible loss of profit, a barrier to achieve target, a loss of partners and a difficult future position on the market for company. From statistical point of view, company cannot be successful and lucky all the time. This process is not possible to be controlled and occasional issues arise from time to time bringing headache to managers. But what is possible to do is: to create possible steps for managing this type of problems. (Transportation Risk Management, 2014)

While cargo is transferred much risk occur which could lead to uncompleted contract obligations.

## 1.2 Focus on the topic: overall objectives

Like every research study includes different targets here are also several objective set. These objectives that must be reached are the following:

- point out the risks and challenges in transportation (by trucks)
- find out how logistics companies handle risks
- categorize risks
- make recommendations for further work of logistics companies

According to the plan these targets will be reviewed, analyzed and described. In the conclusion targets will be discussed whether they were reached or not.

## 1.3 Research method

Usually qualitative or quantitative methods are used for conducting the study. The point is that both methods are suitable. In this study qualitative method was used. Qualitative method provides the possibility to analyze data from several sources very deeply and is why it is used in this research.

Qualitative research is a type of scientific study. In particular, it is an in-depth data gathering and analysis. (Qualitative Research Methods: A Data Collector's Field Guide, 2014) There are number of different tools of qualitative research exist. In this particular research interview was used as an effective tool for data collection.

Interview questions were created based on the data that was gathered from different articles, books. CEOs of logistics companies were interviewed. First interview was done with Kari Talvitie, CEO of Avind International OY. Second interview was with Juri Aleksandrovich Timin, CEO of Omega -Trans OY. The target was to point out the risks and challenges that companies face and what are their ways of solving these problematic situations.

## 1.4 Concepts and terms explanation

Many concepts, documents and terms are used when such a topic as risk management in truck transportation is under research; some of them are well-known, others not. Next part of thesis: different concepts and terms are to be defined.

Transportation is the movement of food, raw materials by using different modes of transport such as: plane, sea transport, road transport and rail transport. (Ehow.com, 2014)

Logistics is process that includes all sections of supply chain: inventory management, freight forwarding, outsourcing, faculty equipment, inventory management, risk management, health and safety management, green supply chain, transportation system planning and warehousing. (Ehow.com, 2014)

Risk management is a process of finding risk, taking control of it. (Transportation Risk Management, 2014)

Documentary credit is a type of payment where conditions are that importer's bank gives guarantees of payment at any case there are no mistakes found in documents. This type of payment is most common for big contracts and export/import relations. (How to get started in international trade, 1995)

Documentary collection is a type of payment that is less expensive and complicated than documentary credit. Moreover there is no need to pay beforehand for importer. Perfect applicability for stable long-term relations. (U.S. Department of Commerce International Trade Administration, 2014)

Competitive market is a place where different producers are trying to sell their goods according to customer needs and wishes. There are no monopolies in competitive market, however some companies could have big position in market. Prices here are usually formed by demand and supply. In some cases government can make some control policy to make battle in a market fair and competitive.

(Economicsonline.co.uk, 2014)

Open account is a type of contract according to which goods are available to buyers before payment and has low risk for importer. Such type of payment usually used between exporter and importer in case of long-term partnership where buyer proved his loyalty. (How to get started in international trade, 1995)

Consignment is a type of contract according to which high risk remains with goods available to buyers before actual payment with time of payment after selling goods as well as risk insurance recommended. (How to get started in international trade, 1995)

CEO (Chief Executive Officer) is person in company of highest position. Responsible for all decisions that company makes. Usually connects board of directors and staff. (Business dictionary, 2014)

Documentary credit is a type of payment where overseas bank gives transport company/exporter guarantee to pay as soon as goods shipped to buyer/importer and all needed documents will be presented to the overseas bank such as: commercial invoices, documents of titles, insurance policies and regulatory documents. (Export Finance Navigator, 2014)

Irrevocable documentary credit is a type of payment which cannot be abolished without agreement of both sides such as for example: exporter/transport company and importer. (Export Finance Navigator, 2014)

Documentary collection is a type of payment which is usually finalized after goods are shipped. Moreover control of the goods is on transport company/exporter until there will be confirmation of payment or payment itself from buyer. (Export Finance Navigator, 2014)

Open account is a type of payment where goods are delivered to buyer with obligation to pay according to the date in invoice. (Export Finance Navigator, 2014)

Prepayment is a type of payment where money is transferred from a buyer/importer to transport company/exporter before shipping of goods. (E-conimic, 2014)



Incoterms is document for exporters and importers with unified terms that makes making contracts as easy as possible due to clarified risks, costs and insurance at every stage of contract. (International chamber of commerce, 2014)

Economical crisis is a situation where economy is having depression, stagnation, companies trying cutting the expenses by firing people and raising employment. Usually happens if risks are not calculated right and assets are overvalued. (Investopedia.com, 2014)

Cash against documents can be characterized as a shipment of goods before actual payment. As soon as money transferred, documentation is sending to the importer/customer by transport company. (Exportfinance.gov.au, 2014)

IRU (International Road Transport Union) is an international organization that protects views of taxi, bus and truck drivers. (iru.org, 2014)

IRU Member Associations are people who are connected to a road infrastructure. (Iru.org, 2014)

Strike is a collective agreement between workers to slow down processes in an environment because of unfair conditions or them (salary, time of work). (businessdictionary.com, 2014)

Natural disaster is a type of extreme weather condition which can strongly slow down or destroy infrastructure and environment (tornados, earthquakes, volcanoes). (Ready.gov, 2014)

Expeditor is a person in company that is in charge for the smooth process of cargo delivery. (Ask.com, 2014)

T1 passport is a document for transferring goods from the customs office at the place of exporter/transport Company to the customs office at the importer side with no obligation to pay customs duties and taxes within the territories of the countries included in the transit agreement. (F1express.fi, 2014)

Consignor - person in charge for consignment transfer to a transporting company which later transfers it to a consignee. (Businessdictionary.com, 2014)

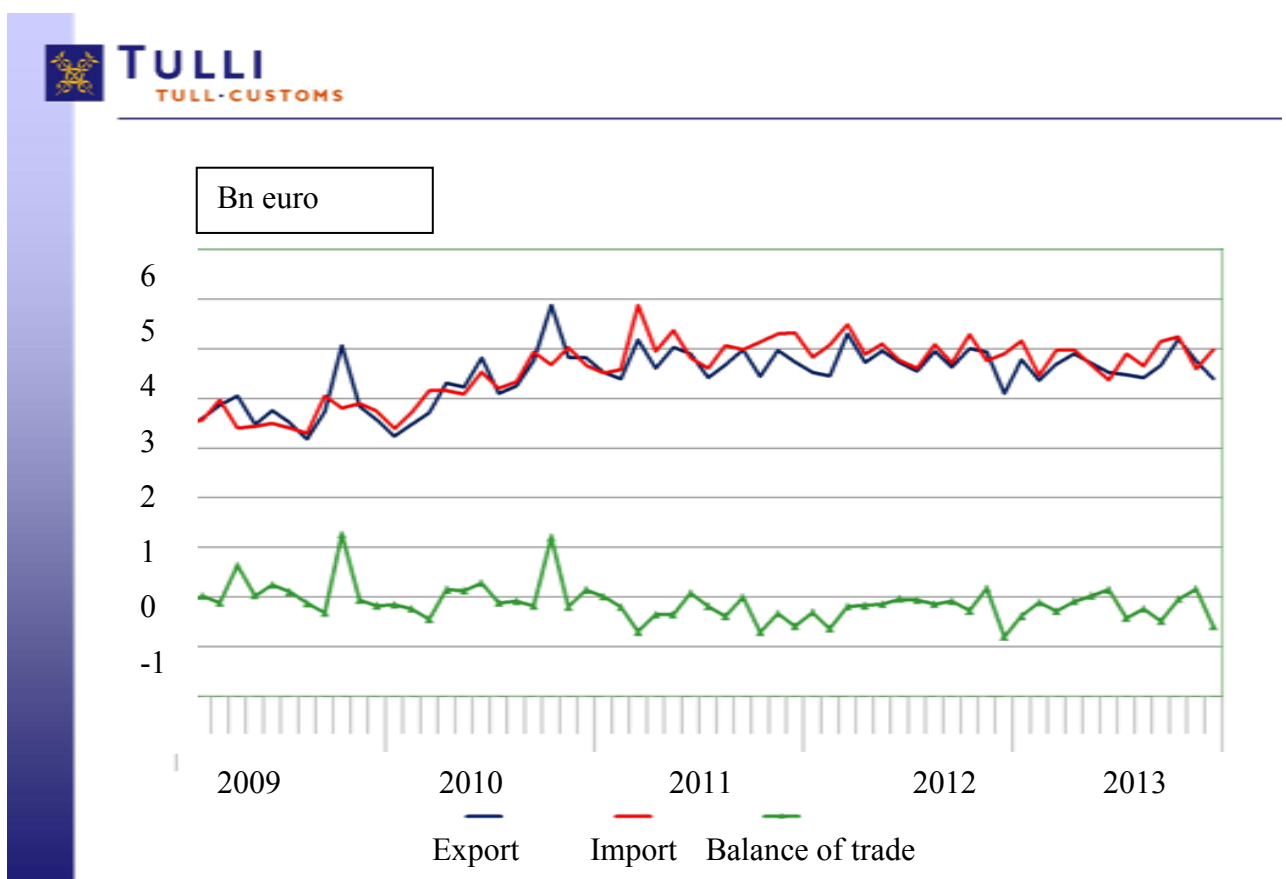
Consignee is in charge to pay for customs duties, taxes, deals also with declaration fulfilling. (Businessdictionary.com, 2014)

CMR is a standardized document for crossing border. There is information on consignor, consignee, forwarder, TIR carnet number, seal number, contract number and etc. (Businessdictionary.com, 2014)

## 2. Transportation management in export and import

When trade relations between countries mentioned it is important to examine import and export. One should mention here that the balance of trade consists of import and export. Balance could be described as a sum of positive numbers – export and negative ones – import. Balance could be positive, negative and equal. Positive balance happens when country export more than import. Negative balance – controversial. Equal happens when export and import quite equal. (Investopedia.com, 2014)

Figure 2 below demonstrates import, export and balance of trade.



## Figure 2 Tulli customs, 2014

According to the picture it can be stated that Finland had a positive balance from time to time during period of 2009 to end of 2010 and since start of 2011 to end of 2013 had negative balance or balance where import and export were quite equal.

### 2.1 Truck transportation

Truck transportation is a way of cargo and container movement by trucks and trailers. Truck transportation is a well-spread way of cargo movement around the world, which is in use by different companies and organizations from small to big ones. (Wise geek, 2014)

More than 200 years ago people involved in transportation environment sensed that trucks would be used in transportation successfully and could be used in combination with trains and boats. Moreover people paid attention to the fact that trucks are not difficult in service, are able to move a lot of cargo and for a long distance and finally in any weather conditions. (Wise geek, 2014)

The different trucks and trailers have been invented for carrying out wide range of objectives in last hundred years: dangerous goods, oil and gas, platform trucks for cars and trailers with refrigerators for food staff. (Wise geek, 2014)

### Importance of trucks in logistics

Trucks in transportation are a vital part in a whole supply chain of transportation. Trucks could substitute planes, trains and boats partly, not totally. In addition one could not mention that trucks are not able to be replaced totally by other mode of transport. (International Road Transport Union, 2014)

Swedish Association of Road Haulage Companies (Sveriges åkeriföretag) showed the importance of truck transportation. The idea was that trucks were not in use for a five days and the functionality of four regions was observed: Falun/Borlänge, Borås, Växjö and in Umeå. (International Road Transport Union, 2014)

On the first day the consequences were the following (International Road Transport Union, 2014):

- milk and bread were bought in stores
- lack of linen in hospitals (due to non-delivery)
- people should get rid of rubbish by themselves
- post was not delivered

On the second day the consequences were the following:

- pharmacies were closing
- fresh food was no more in stores
- restaurants had problems with supplier

On the third day the consequences were the following:

- dairy products were no more available
- milk was not collected anymore
- fuel was finishing
- post was not delivered
- there are no more clean sheets in a hotels could be found
- there are some bus cancelled

On the fourth day the consequences were the following:

- garbage was on the streets
- public transport was not working anymore as well as air traffic
- no more newspapers
- no fuel left

On the fifth day consequences were the following:

- no more drinking water
- hotels were not working
- restaurants were not working
- pupils did not have lunch
- industrial production no more available

To conclude one could mention that research that was done by Swedish Association of Road Haulage Companies showed the huge importance of truck transportation nowadays, that trucks are at every stage of supply chain in any everyday situation of our life. (International Road Transport Union, 2014)

## 2.2 Risk management in logistics and transportation

To begin with, we are living in a world in which integration, cooperation, international trade and the most important is that the international contracts and transportation become more and more well-spread. All these are positive steps for the people worldwide. One should, however, not forget that when international trade and transportation happen, companies must handle with risks. (Vs.inf.ethz.ch, 2014)

In the second part of research the focus is to point out and describe what the risks are. Also Incoterms and TIR are reviewed due to their huge role in transportation and risk management.

### 2.2.1 Incoterms 2010 and its role in risk management

Incoterms – internationally accepted rules that clarify the most common used trade terms in import and export operations. International trade terms could be defined as standard terms of bargain and sale contracts between countries, which are set in world-widely accepted document. (International chamber of commerce, 2014)

All companies that operate with export and import work with Incoterms 2010. It is highly important to mention that Incoterms could be used as an effective instrument in risk management with ability to decrease risks or neutralize them at least partly. With Incoterms exporter and importer understand each one's role. In this research the focus is on the terms that are used for all types of transport and particularly for truck cargo transportation. So the terms that will be reviewed deeply are: CPT, CIP, DAP, DAT, DDP, EXW, and FCA. (International chamber of commerce, 2014)

It goes without saying Incoterms regulates the most important issues that arise while making export-import operations:

- Who is in charge of risk of loss or damage at each stage of delivery
- Time of cargo's delivery from exporter to importer or delivery of goods from exporter to third-party side to, finally, importer.
- Who is in charge of transport expenditures at each stage. (Easy Inco, 2014)

It is important to mention that Incoterms is not in charge of failure of contract obligations after delivery. (International chamber of commerce, 2014)

Figure 3 illustrates who is in charge for costs, risks, insurance at each stage.

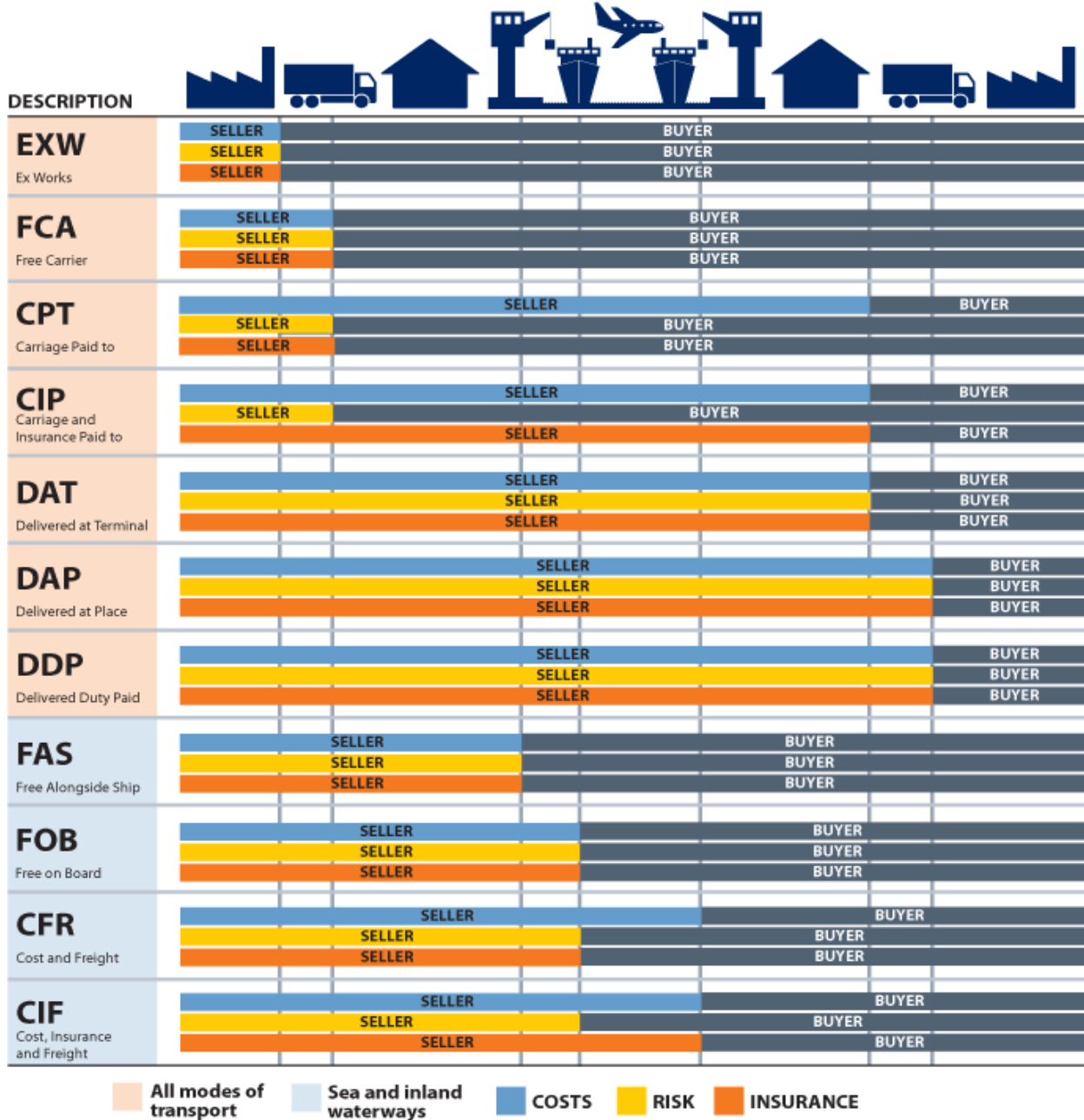


Figure 3 Incoterms 2010 (Jms-logistics, 2014)

As it was said earlier focus will be on CPT, CIP, DAP, DAT, DDP, EXW and FCA and brief explanation risks will be presented.

**EXW** - Ex Works

Risk mainly is on buyer from seller's warehouse

**FCA - Free Carrier**

Risk mainly is on buyer from named place on the side of exporter/transport company

**CPT - Carriage Paid To**

Risk mainly is on buyer from named place on the side of exporter/transport company

**CIP - Carriage and Insurance Paid**

Risk mainly is on exporter/transport company until terminal on the side of importer

**DAT - Delivered At Terminal**

Risk mainly is on exporter/transport company until terminal on the side of importer

**DAP - Delivered At Place**

Risk is on exporter/transport company until named place of deliver on importer side

**DDP - Delivered Duty Paid**

Risk is on exporter/transport company until named place of deliver on importer side

(Easy Inco, 2014)

### 2.2.2 TIR and its role in managing logistics' safety risk

TIR (International Road transport) is an international transit system that is based on UN Convention and operates in international environment, in partnership with state and private sector. TIR system has been successfully working for a quite long time by making easy and safe trade with international transportation. Moreover TIR allows all transport trucks and cargo occupied with customs seal to cross countries in transit mode without check at boarder. Among TIR members there are such organizations as: IRU, TIR Carnet Holders, United Nations bodies, IRU Member Associations, National Authorities. (International Road Transport Union, 2014)

Advantages of TIR:

- Decrease of expenditures

- Fast border crossing
  - All customs documentation preparations are done at place of exporter (departure point) and importer(destination place)
  - Guarantee of customs payment
  - Usage of free pre-customs and risk-management instruments
- (International Road Transport Union, 2014)

TIR System consists of:

- International guarantee (IRU)
  - TIR carnet (IRU)
  - Mutual acceptance of customs formalities
  - Access, controlled by customs departments and IRU
  - Data transfer by SafeTIR
  - Safety of trucks and cargo
- (International Road Transport Union, 2014)

Parts of TIR

TIR is a vast system that consists of TIR-EPD, ASKTIR, SAFETIR, ASKTIRWEB, TIRCUTE, CUTE-WISE and finally RTS. (International Road Transport Union, 2014)

Below in the figure 4 it is illustrated what these parts are in charge



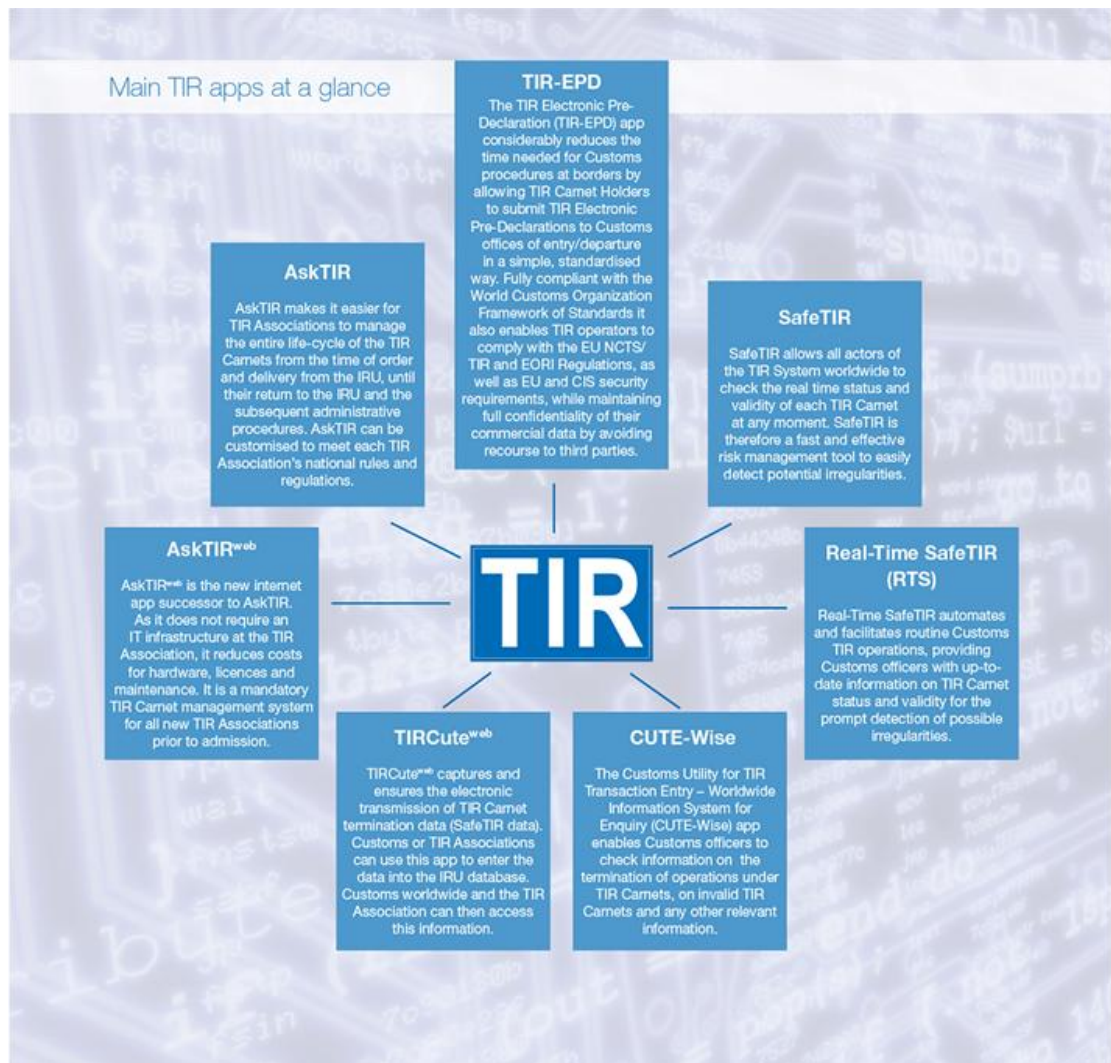


Figure 4 International Road Transport Union, 2014

As it is possible to see from the figure 4 (International Road Transport Union, 2014)

- CUTE-Wise gives customs officer possibility to check the information on the operators, on invalid TIR Carnets and etc.
- SafeTIR allows checking validity of TIR Carnet
- Real-time safe TIR provides latest info on TIR Carnets
- TIR-EPD saves much time on making pre-declarations
- AskTIR provides comfortable way of working with TIR
- AskTIRweb app that was done to cut the costs on licenses

To conclude, it is important to say that all these parts work together and make life of exporters, importers, transport companies, expeditors, truck drivers and finally customs staff as easy, safe and fast as possible. (International Road Transport Union, 2014)

### 2.3 Types of risks in transportation

While managing transportation many things must be kept in mind. Among those things are different risks. They are at every stage, every step: from new partners, unknown environment with its challenges and difficulties to things that could not be predicted and controlled as bad weather conditions, natural disasters, strikes, customs changes. (Transportation Risk Management, 2014)

#### New contracts/partners

Before negotiations between exporter/customer and logistics company start, logistics company should gather information about the importer, how reliable he/she, has he ever had contracts with transport companies, does he pay well and in time, what goods he is transporting. All these things are vital for transporting company for a the number of reasons. Firstly, the transport company should understand what type of company it is working with, with good reputation or not, wealthy enough to work with or not, and after that it will be able to suggest payment types that are suitable for the particular exporter. Secondly, there is information about goods that exporter wants to transfer. In particular, it is important to know what type of goods exporter wants to transfer, whether it will be difficult to manage documentation, fees and duties. Finally, it is necessary for the transport company to understand if it is able to face customers requirements (for example fast delivery) and not to fail to transfer goods and lose reputation. (Gov.uk, 2014)

#### Unknown environment

Unknown environment is one of the first challenges that transport companies face in transportation and must handle with. The risk here comes from new country where to goods have never been transported before and where many actors are unknown and should be analyzed. Among them are: customs clearance (where documentation could vary from one country to another), queues in border (that can increase time of delivery), safety on roads (in regard to the criminal environment), and optimal routes (the ones which are shorter). All these risks and factors must be gone through before making transportation. (Transportation Risk Management, 2014)

#### Risk management in payments

In any type of business there are buyers and sellers, importers and exporters. One of the things that exist in every deal is money for the goods. So here comes as well risk of non-payment. Risk of non-payment is a situation when for example transport company transfers goods to importer but does not receive payment for the operation. In order to decrease risk and control risk here could be used different payments such as: prepayment, documentary collection, and cash against documents, documentary credit and open account. (Export Finance Navigator, 2014)

Figure 6 below shows payment types according to the risk for exporter/transport company and buyer.

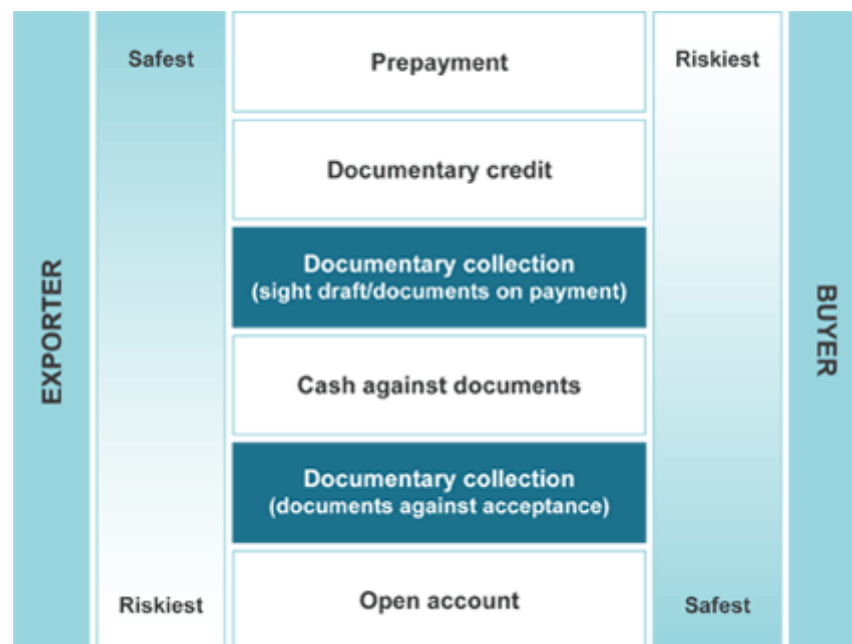


Figure 6 diagram of payment types (Export Finance Navigator, 2014)

As it is possible to see in figure 6, in case of exporter/transport company the best option (in regard of risk) will be prepayment, documentary collection and documentary credit (sight draft/documents on payment). The worst one (in case of risk) for exporter/transport company is an open account controversial is for importer/buyer.

### Prepayment

When the client is new and not much info could be found on it, the best option will be prepayment. It is safe and easy type of payment to handle with. Firstly the importer

transfers to transport company/exporter money then he/she receives cargo.  
(E-conimic, 2014)

### Documentary credit

One of the safest types of payments due to guarantees by importer's bank. (Export Finance Navigator, 2014)

Figure 7 below shows the whole detailed process of irrevocable documentary payment.

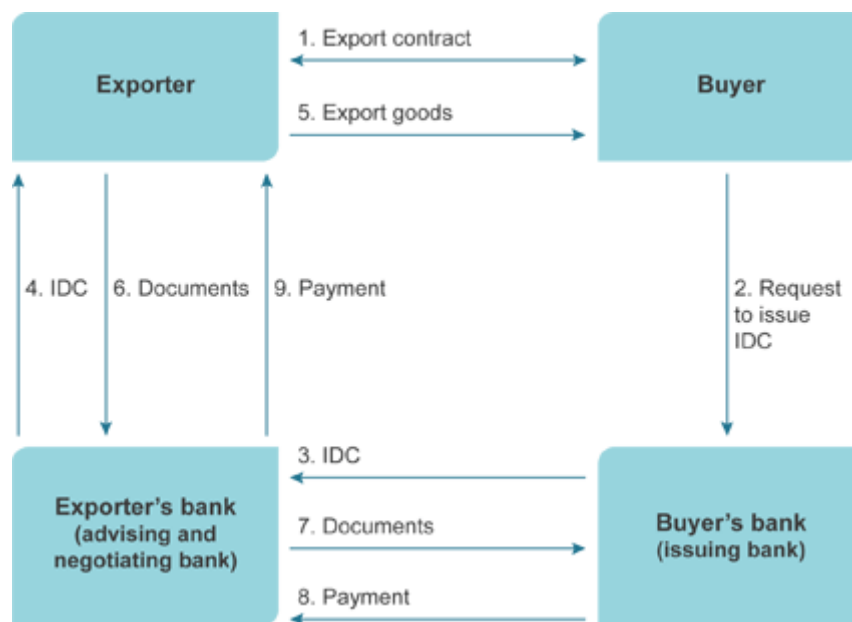


Figure 7 payment by irrevocable documentary credit (Export Finance Navigator, 2014)

Payment by documentary credit consists of several steps (Export Finance Navigator, 2014)

1. As soon as the contract is agreed by both sides, there will be the documentary credit opened by importer/buyer with bank. Moreover overseas bank is in charge for a verification of importer's resources.
2. Importer's bank transfer the documentary credit to exporter/transport company bank. Later check is done by exporter's/transport company's bank and the documentary credit is remitted to exporter/transport company.
3. The documentary credit gives full description of documents that should be

presented to gain the payment. As soon as goods shipped and all the documents gathered, exporter/transport company and exporter's/transport company's bank negotiate about payment.

4. Exporter's/transport company's bank is in charge for verification of all the documentation and terms of documentary credit. Later documents are sent by exporter bank to the issuing bank/importer's bank with money transaction request.
5. If all the documentation received by issuing bank exact as it is required by the documentary credit, payment transfers to exporter's/transport company's bank, which forwards payment to exporter/transport company.

### Documentary collection

Good alternative to documentary credit is the documentary collection: cheaper and easier than documentary credit. (Export Finance Navigator, 2014)

Figure 8 below demonstrates the whole detailed process of documentary collection.

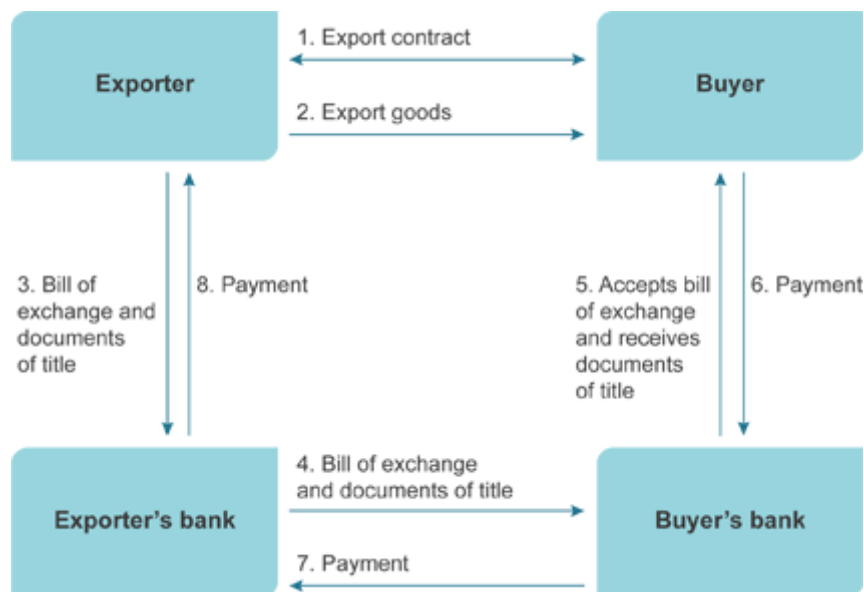


Figure 8 payment by documentary collection (Export Finance Navigator, 2014)

Payment by documentary collection consists of several steps (Export Finance Navigator, 2014)

1. As soon as export contract agreed by both sides and terms of documentary collection are confirmed, exporter/transport company transfers goods to importer.
2. Exporter/transport company submits the bill of exchange and all the needed

documents for shipping with exporter's/transport company's bank.

3. Importer's bank receives the bill of exchange and shipping documents with instructions from exporter's/transport company's bank.
4. Importer's bank transfers to the buyer the bill of exchange for confirmation.
5. Importer confirms the bill of exchange by signing it only in case if payment terms are verified by the bank. Then transfer payment transfer goes from importer to importer's bank. After payment is transferred importer receives all the shipping documents. Such a way of making the payment is known as sight raft/documents against payment. (Export Finance Navigator, 2014)

However, there could be date in the bill of exchange. This means that importer is to pay on the date that is in the bill of exchange. In that case he receives all the documentation for goods. Such a way of making the payment is known as documents against acceptance.

6. As soon as importer's bank receives payment from importer, it transfer money to exporter's/transport company's bank which remits them (money) finally to exporter/transport company. (Export Finance Navigator, 2014)

The process is somewhat long but it is safer than open account and cheaper than documentary credit.

## Open account

Type of payment that is easy to handle with. Only in use in long-term partnership. (Export Finance Navigator, 2014)

Payment by open account consists of several steps (Export Finance Navigator, 2014)

1. Negotiation and finalization of contract by exporter/transport company and importer.
2. Transfer of goods and invoice to importer from exporter/transport company
3. Exporter/transport company has no more control of goods since then goods are shipped to importer.
4. Importer receives goods
5. Exporter/transport company receives payment according to the date in the invoice (by bank transfer or international bank cheque. Also it is important to mention that accountant should check payments that they are done fully and in time.

To conclude, one must add that such an easy type of payment could be used easily only when partners know each other so goods are delivered in time and money are transferred according to the deadline.

#### Long queue at customs

Quite a frequent problem that logistics companies have to deal with. Type of problem that happens from time to time and is risky for company. Mainly because queues have ugly consequences for truck drivers and respectively for logistics company: long time in customs could lead food stuff to be going out of date, for example, or machinery that must be fast delivered for making manufacturing schedule in time. Such a situation can lead to dissatisfaction of customer and possible fees or confrontation between exporter/customer and transporter. Confrontations could easily happen with arguments that transporter was not aware on situation with customs or did not transfer goods through another customs border without queue. Also mistake in documentation could lead to a long time customs procedure. (Ec.europa.ru, 2014)

#### Strike risk (in customs, seaport (terminal))

Type of risk that usually rarely happens but has maximum risk for exporter and very bad consequences. During strikes wherever it happens in customs or at seaport, where drivers can get transit cargo, workers do not do their job and neither transportation nor trade between companies, countries exist. Continuation of transportation is possible as soon as strike finishes. (Holman Fenwick William, 2014)

#### Difficult or bad weather conditions

Such risks that transport companies are able to face. It could be snowing, raining, windy and foggy. All these conditions are quite dangerous, can slow down truck transportation and in some cases lead to lose control of truck and break the delivery to customer. (anapolschwartz.com, 2014)



Figure 5 (OREN.AIF.RU, 2014)

#### Problems with staff (drivers)

Sometimes risk happens because of inability to control driver. He can delay delivery, break the rules (over speed) and crash the truck. Chance to make mistake rising and risk respectively can rise. (Ec.europa.ru, 2014)

#### Currency risk in contracts

A currency risk arises with international transporting and different currencies respectively. Currency risk occurs because of regular quotation change. Changes of exchange rates can lead to increscent or decreasment of profit. (Suncorp bank, 2014)

#### Risk of losing goods

Goods could be lost during transportation. The good thing is that in contract it must be said at what stage of delivery risk of goods loss transferred from exporter/transport company to importer/buyer. (Pstcc.edu, 2014)

#### Country risk and changes in customs regulations

Country risk is a risk that can happen in case of government restrictions, control. If government feels that national goods are not competitive enough because of low prices on import goods, it can increase duties on such an import goods. Also restrictions could be in case of dangerous goods (goods that have some infections, bacteria's) and country makes embargo for that particular goods to prevent possible spread of epidemics. (Suncorp bank, 2014)



## TIR crisis in Russia

Nowadays there are disputes in TIR use between Russian Federal Customs Service and IRU. The idea that is that head of Russian Federal Customs Service (RCS RF) breached the trade law, by putting TIR restrictions on the territory of Russian Federation from 14 August 2013. Since then many meetings were convened between RCS RF and IRU to find solutions in regulating issues with TIR carnets. The problem for transport companies is that new way of making customs clearance with TIR carnets is three times more expensive than it used to be as well as with T1 passport is a more expensive way of making the deals rather than TIR carnets. (International Road Transport Union, 2014)

## Truck problems

During transportation there are different problems that can arise. Among them: problems with engine, problems with trailer and finally problems with tires. That type of risk can influence on time of delivery. Engine and trailer can break down and quite much time will be spent on repairing or purchasing the needed details. It is difficult to say how much time is needed on repair; anyway one can say that it depends on situation and type of breakage. Moreover it will take quite much time if tires are blowout. (Carecare.org, 2014)

## Natural disasters

There are different natural disasters that can influence transportation such as floods, earthquakes, tornados, fires and hurricanes. All they have different effect in regard to damage and have totally negative effect. (Ltrc.lsu.edu, 2014)

## Quality control

Quality control is a goods check. In particular, it means that goods must be of the same color, quality and consistency as they are in documentation. However companies rarely use it, sometimes even miss it because nowadays time of delivery is of higher importance and cargo quality control strongly slows down the time of delivery. (Log.logcluster.org, 2014)

### 3. Risk management in a working environment with empirical results

In the third part of thesis research focus goes to risks neutralization, control and decrease of the risk in working environment. All the data was collected throughout interview with CEO's of logistics companies. Firstly CEO's explained what the firms are, what are their missions and visions in logistics. Further dialogue and data gathering was on risks and challenges that they face, how they control, neutralize and decrease it and finally they gave their assessment to the risks: how often they face it and what is possible damage to company.

#### 3.1 Company's description

Avind International OY is a large logistics company, situated in Kotka. Warehousing, trucking and forwarding are among main services. Main target of the firm is to get profit as it is usual target in business. Besides, company's priority objectives are to fill out all the documentation for national, international transportation and transit transportation, to get customs process as fluent as possible as well as a customer. CEO of the company is Kari Talvitie from 1998-nowadays. (Avind International OY, 2014)

Omega – Trans OY is one of the biggest logistics companies that have a number of services: transit transportation, customs clearance, forwarding, warehousing, and sea transport. The company was founded in 1995. In the beginning of 2006 new owners took control of the company and company has become a strong competitor in the market. CEO of the company is Juri Aleksandrovich Timin. (Omega-Trans OY, 2014)

#### 3.2 Managing documentation for Finnish/Russian customs

In that part of research process, managing documentation is described by example of Avind International OY.

After negotiations are gone and contracts are signed, the managing of documentation comes with its challenges. Here challenges mean that all the documentation should be prepared accurately without mistakes, so that the driver will have easy and fast customs at Finnish and Russian border. The process of documentation will be described step by step (case transit container from China).

1. Expeditor of logistics company receives an e-mail from exporter with invoice, packing list, and (sometimes) requests transport company to send driver for a weighing procedure before loading and after loading and (sometimes) requests to put TIR seal into container.
2. Further expeditor start collecting documentation and makes 5 copies of invoice and 5 copies of packing list (for transport company, for Finnish customs, for Russian customs, for driver and finally for importer/customer )
3. Then fulfilling of CMR and TERMINAL ADVICE comes. Fulfilling of these documents is done usually through excel or special soft programs.
4. After these documents fulfilled, they are sending to customer, which checks them.
5. After customer confirmed all the data, documents are sent to port Mussalo, Kotka and to customs in electronic version.
6. Driver goes to port to take container that was unloaded from vessel.
7. Driver comes to transport company and fulfils arrival report and goes to Hietanen, Kotka (parking place for trucks) where he wait for the call of expeditor.
8. Expeditor finalizing with documentation: add (if customer wants seal) seal number to CMR, TIR number MRN number which he gets when fulfillment of AREX is done on website of Tulli customs, fulfils electronic version declaration to get container back to port Mussalo, Kotka.
9. When documentation is prepared, expeditor calls driver to come to the office, take documentation. If customer wants to put seal, then expeditor goes to container to put seal, mark locking mechanism and take photo of all this.
10. And finally driver delivers goods to the customer/importer.

### 3.3 Possible risk neutralization and control

When we talk about risk management, we mention such an important topic as a risk neutralization or risk control .In another words risk control or risk neutralization is a possibility to avoid risk, manage risk or decrease risk in case of inability to control it.

#### Risk control in payments

In this research focus is on types on payments that are used by Avind International OY and Omega-Trans OY: prepayment, documentary credit, documentary collection and open account.

## Prepayment

After several payments and successful cooperation, payment option could be changed to open account. Also prepayment is used when client has difficulties with cash so that transport company starts dispatch as soon as it receives payment. Finally it must be said that this payment is used from time to time by Avind International OY and Omega-Trans OY.

## Documentary credit

Documentary credit is a rarely used type of payment for logistics companies that is preferable to transport company due to low risk and guaranties by overseas bank. Logistics companies use it only in case of expensive goods. Mainly not in use by Avind International OY and Omega-Trans OY because of long process of fulfillment. If to finalize, it is possible to mention here that documentary credit is the safest payment when transport company deals with new clients with lack of confidence in them. Type of payment that is quite expensive to organize.

## Documentary collection

Alternative to documentary credit is the documentary collection. This type of payment is also rarely used by Avind International OY and Omega-Trans OY, because of its complexity.

## Open account

Last type of payment that will be reviewed in this research study is the open account. Most of the payments are handled in that way by Avind International OY and Omega-Trans OY. Open account is a good option as a payment in case of long-term partnership. This is because invoice with request to pay comes with goods, risk of non-payment is pretty high.

## Unknown environment

In case of this particular work, unknown environment means that transport company has never worked at that particular country. There are different ways how logistics

companies got info about unknown environment. First of all they read in the internet basic info about country, population, infrastructure, economy, its roads, try find out what documentation needed for customs, what are the duties, what modes of transport better to use and possible to use. There are number of web links of different trade organizations and unions that can make getting info easier: world customs organization, world trade organization, International Federation of Freight Forwarders Associations, global edge and etc. Secondly they can hire person, who is well aware of environment on full time or part-time work. And the last but not the least option for company could be outsourcing. In that particular case it means that as soon as they cross the border of unknown country and unload container to local logistics company, obligation to deliver goods in right time and to the right place will be transferred to local carrier. Subcontracting is a usual practice not for Avind International and Omega-Trans but for leaders of logistics such as DHL, UPS and MAERSK.

#### New contracts/partners

Such companies as Avind international and Omega-trans deal with number of exporter/customers. According to the data that was received through interview of CEO's, they try to collect info about companies by internet and expeditionary company that had deal with them had good contacts with Avind and Omega-Trans respectively. Reliable info could be got only that way.

#### Long queue in customs

There are different solutions on how companies try to avoid their trucks got stuck in a customs and obtain bad consequences from that. First thing what they do is to look on cameras on queues at the Rajaliikenne.fi.

And after that they have info on current border situation, and able to transfer goods in time through customs where less trucks and satisfy expectations of final customer.

Also according to the experience that these particular logistics companies have and statistics throughout last years, they can suggest beforehand another mode of transport to deliver goods to final customer/importer.

#### Strike risk

Type of risk that cannot be controlled and hardly avoided. Avind International and Omega-Trans happened to face with it in 2005. They faced with this particular problem because they deal mainly with transit traffic and cargo that comes by vessels from China to ports where drivers pick it up in Mussalo, Kotka and later transfer it to Russia.

Dockworkers had three-day wage strike in Finland all around ports in Finland from April 15-17 in 2005. Around 3500 workers closed ports and trade has strongly decreased in that time as well as transportation. The strike happened because of two reasons: huge number of part-time workers (about 25 % and 15% more than allowed) and low salary for night time work. Dockworkers were not satisfied that they had to work by part-time conditions and receive less salary respectively rather than they could have working on full-time conditions. Also bosses wanted to pay for night time work less than must be paid. Later all the sides reached the agreement and all the processes recovered. (The Militant, 2014)

#### Bad weather conditions

There are several ways on how risk could be decreased over here. Weather could not be controlled and truck drivers can make just several things. Firstly they must follow driving rules and don't over speed. Secondly they must change tyres according to the driving rules. And finally they could look for the weather forecast before transportation to be more informative and prepared. Also important to mention that drivers have "window" to deliver goods in time. "Window means" that if weather conditions like heavy rain or snowfall slows them down, they can easily wait for good conditions and then deliver goods without hurrying.

#### TIR crisis in Russia

Nowadays companies are trying to make another way of documentation management: avoid or decrease using TIR and use T1 passport due to TIR crisis in Russia. Omega-Trans is not using TIR anymore while Avind international uses both them.

#### Problems with drivers

Companies are able to handle with this problem in a different ways. Firstly only well-experienced drivers are hired so that transporting company is sure that driver is competent from departure to delivery. Secondly there are gps system is on trucks, so that expeditor or CEO of the company can control and follow the process of delivery easily.

#### Natural disasters

Logistics companies can't predict them, they happen rarely. The only thing they are able to do is react fast, suggest extra ways for delivery and suggest another mode or modes of transport for delivery.

#### Truck problems

Companies are not able to do much if this problem happens. The only way they minimize it, is taking care of trucks, checking them before departure. Some extra details can be taken by driver.

#### Country risk and changes in customs regulations

According to the experience of CEOs and common practice in customs regulations, if customs changes happen, there is a big time before law start working, so that logistics companies can adapt to them beforehand.

#### Insurance

Usually companies take insurance for low risk coverage. According to their more than huge experience and smooth process of delivery there have been only not many cases for a long-long period of time when something was lost or stolen. Also if customer/importer wants to have extra insurance (cover the price of loss fully) done by transport company, he/she contacts with transport company/exporter to tell them make an insurance, also he/she is free to do it himself/herself.

#### Risk of goods damaged

Before dispatch companies can check packages on how they packed. Some categories of goods like paper are transported by truck with not many pallets in truck because for example, one paper pallet can be 610 to 670 kg and overload is avoided. Set a particular number of km that driver is able to drive per day so that over speeding will be avoided as well as damage for the goods.

#### Risk of loss of goods

For the whole history of operating with the cargo only several cases of goods loose happened in Avind International OY and Omega-Trans OY.

#### Quality control

Avind International OY and Omega-Trans are not using quality control to check goods due to great trust between them and their customers.

#### Currency risk

To avoid currency risk, transporting companies deal only with euro. They pay for trucks in euro, customers pay them in euro so that everything is in euro. It means that they don't have risk of changing exchange rates on different currencies.

### 3.4. Risks assessment

There are four columns in the table. In the first column risks are presented in an alphabetical order. In the second column average grade of risk possibility is represented. In the third column is the average amount of possible damage to company represented if such a risk happens. And the final grade consists of average grade of risk possibility multiplied on the average possible amount of damage to company. Since interviews are done with CEOs of Avind International OY and Omega-Trans OY and the grades were settled by CEOs according to their longer experience and data, grades in second and third column are average.

Grading system is on the scale 0 to 5.



- The 0 assessment means that chances of risk to happen goes to 0%.
- The 1 assessment means that risk very rarely happens.
- The 2 assessment means that there is a small chance of risk to happen.
- The 3 assessment means that risk happens from time to time.
- The 4 assessment means that risk happens often.
- And finally 5 assessment means that risk is a normal everyday challenge.

RISKS	POSSIBILITY TO HAPPEN	AMOUNT OF POSSIBLE DAMAGE	FINAL RISK ASSESSMENT
Bad weather conditions	1,5	1	$1,5 \times 1 = 1,5$
Changes in customs regulations	1	2	$1 \times 2 = 2$
Currency risk	0,5	1,5	$0,5 \times 1,5 = 0,75$
Insurance	1	2	$1 \times 2 = 2$
Long queue in customs	2	2	$2 \times 2 = 4$
New contracts/ partners	1	2	$1 \times 2 = 2$
Natural disasters	0,5	4	$0,5 \times 4 = 2$
Problems with drivers	2,5	3,5	$2,5 \times 3,5 = 8,75$
Quality control	0,5	1	$0,5 \times 1 = 0,5$
Risk control in payments	2	4	$2 \times 4 = 8$
Risk of goods damaged	1,5	2	$1,5 \times 2 = 3$
Risk of good's loose	0.5	3	$0,5 \times 3 = 1,5$
Strike risk	1,5	2,5	$1,5 \times 2,5 = 3,75$
Truck problems	2,5	2	$2,5 \times 2 = 5$
TIR crisis in Russia	2	2	$2 \times 2 = 4$
Unknown environment	2	3	$2 \times 3 = 6$

Table 1 Risks assessment

The idea was to classify grades from this table 1 according to their importance by dividing them into the groups of high importance with grades 5 to 9, middle-range importance with grades 2 to 4,5 and low importance with grades 0 to 1,5.

Group 1 high importance risks with grades 5 to 9: in that group it is possible to find here that truck problems are happen and possible goods late delivery will lead to unsatisfied client, unknown environment is a major issue for companies as well as risk control in payments and the highest importance is truck drivers, because companies happen to face with driver's low work ethic and low IQ.

Group 2 middle range importance risks with grades 2 to 4,5: in that group it is possible to find that companies face with different risk or can face with them and they will create number of problems and challenges: changes in customs regulations that is relevant nowadays due to debates on TIR between IRU and Russian customs, insurance issues, natural disasters that happen very rarely and can destroy transport infrastructure, new contracts that have mutual profit and possible risk due to lack information on company, risk of damaged goods exist however companies rarely face with it, strike risk and long queue in customs which companies faced and count as a risks

Group 3 low importance risks with grades 0 to 1,5: with currency risk that companies are not dealing with but can face if for example they will work with countries where euro currency is not the main option and also bad weather conditions that companies can face but with low possible risk connected with it. Finally here also quality control and risk of goods loose because logistics companies are not facing with these risks.

#### 4. Conclusion

While making the thesis there have been some difficulties met:

- not many previous research were done on that topic
- there was difficulties on finding statistics of import and export due to high complexity of customs website
- huge difficulties with finding concepts and terms explanations were met but successfully overcome

Most of the risks that companies face in logistics were mentioned. However some terms and concepts that were found were not described due to the lack of information

about them. They are: corruption risk in transportation and risk of epidemics (country is being blocked for incoming and out coming transport). The inequality of the number of risks described in the theoretical part with the number of risks mentioned in the practical part comes from the fact that some additional risks were revealed in interview with companies' CEOs.

Despite challenges that slowed down and harmed process of thesis research, all the objectives were met. The study was done properly and can be further used for scientific works and articles.

Further recommendations for companies are:

- take risks seriously
- CEOs should make personal studies on risks that companies are the most likely to face, so that companies will know particular challenges and risks
- create solutions to them
- think of implementing some solutions that were suggested in the practical part

Also it is crucial to mention that risks that were found could happen in every logistics company, but solutions that were suggested are not unique and could not be applied to every company, because companies differ and the ways of carrying out the tasks differ much. Moreover, it is necessary to emphasize that only two companies were observed and some risks and solutions can be missing.

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