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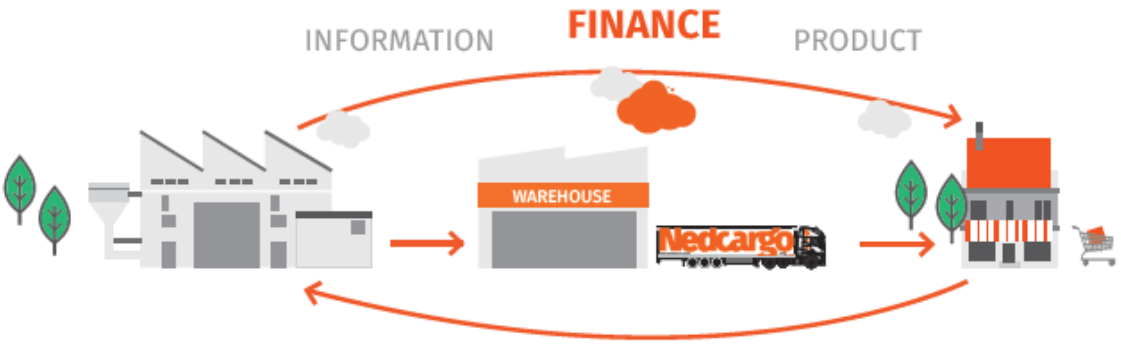
Supply Chain Finance for Logistics Service Providers

This report contains confidential information and is intended solely for the direction of Nedcargo, the external supervisor Mr L. Gelsomino, the school supervisor Ms H. M. van Raalte, the second reader Mr M. el Ouasghiri, the external reader Mr M. Dalmeijer and the intern Mr J. Klop. This report may only be published on the 'hbo-kennisbank' or used for internal school purposes without the appendices. All appendices are confidential.



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Management Summary

This report examines the Supply Chain Finance possibilities for Logistics Service Provider Nedcargo International B.V. by answering the following research question:

'Which substantiated advice can be given to Nedcargo International B.V., in which the Supply Chain Finance instrument(s) and the parties with whom the Supply Chain Finance instrument(s) should be implemented are selected, that will optimise the financial flows of all parties in the supply chain of Nedcargo, thus improve/shorten the Cash Conversion Cycle and increase the Net Working Capital availability, and how should the selected Supply Chain Finance instrument(s) be implemented?'

Current Situation
By analysing the financial data of Nedcargo of the year 2016, the Working Capital and Cash Conversion Cycle are calculated. The weighted average Cash Conversion Cycle lies between 9 to 20 days. Both Nedcargo and its customers do not uphold the agreed upon payment terms. Over 63% of all invoices are paid overdue to Nedcargo by customers. Customers pay the invoices 4 to 10 days after the agreed upon payment terms. For suppliers, 61% of all invoices are paid overdue to suppliers by Nedcargo. Nedcargo pays the invoices 1 to 11 days after the agreed upon payment term.

The current Net Working Capital for Nedcargo is negative with -€190,000.–. This may result in Nedcargo being unable to pay for its short term debt. The current Days Sales Outstanding result in €161,000.– in financing costs and €10.7 million Working Capital which is trapped in the supply chain for Nedcargo compared to receiving payments after 0 days. Due to the 63% overdue payments from customers, Nedcargo is making 17.1% additional costs (€23,000.–) and has 17.1% less Net Working Capital (€1.6 million). Freeing the trapped Net Working Capital would allow Nedcargo to pay for its short term debt and enables investment.

For the supplier of Nedcargo, the Days Payable Outstanding result in €186,000.– in financing costs and €5.8 million Working Capital which is trapped in the supply chain compared to receiving payments after 0 days. Due to the 61% overdue payments from Nedcargo, suppliers are making 43.9% additional costs (€56,000.–) and have 43.9% less Net Working Capital (€1.8 million). Freeing the trapped Net Working Capital would allow suppliers to pay for their short term debt and enables investment.

New Situation
Based on previously conducted research, five models were selected which could potentially be implemented in the supply chain of Nedcargo; Dynamic Discounting, Reverse Factoring, Inventory Financing, Structured Commodity Financing and Fixed Assets Financing.

Dynamic Discounting could offer a cash benefit to all parties in the supply chain by shortening the payment term to a customer with lower interest, or by extending the payment term to a customer with higher interest. However, extending the payment term would require a Net Working Capital investment from the supplier. Shortening the payment term would require a Net Working Capital investment from the customer. This does not mean that there is no benefit, but the cash benefit goes at the costs of the Net Working Capital availability.

Reverse Factoring on the other hand could create a win-win situation for all parties involved. With Reverse Factoring, the supplier will receive earlier payment which frees up Net Working Capital, and the customer receives an extension of the payment term towards the bank which frees up Net Working Capital. Therefore, Reverse Factoring could be more beneficial in terms of both the cash benefit and Net Working Capital. However, offering Reverse Factoring to the C suppliers of Nedcargo may pose as a challenge due to banks not willing to finance such small amounts.

Structured Commodity Financing cannot be offered by Nedcargo to its suppliers. The reason for this is that Nedcargo does not have an annual purchasing value of €1 billion or more. However, some of Nedcargo its customers could potentially offer Structured Commodity Financing to Nedcargo. Structured Commodity Financing would decrease the Days Sales Outstanding and free up Net Working Capital which can be invested by Nedcargo. The cash benefit and effect on the Net Working Capital are the same as they are for Reverse Factoring.

On the customer side, the advice is that Nedcargo should prioritise adopting Reverse Factoring or Structured Commodity Financing from its customers. Both models will create a win-win situation for

both parties involved. Nedcargo could save €161,143.– in financing costs and free up €10.7 million in Net Working Capital by adopting Reverse Factoring or Structured Commodity Financing from customers. Customers also benefit because they could gain an interest benefit and additional Net Working Capital by receiving a payment term extension. Dynamic Discounting comes at the costs of higher financing costs or less Net Working Capital, therefore Dynamic Discounting should only be considered as an option if both Reverse Factoring and Structured Commodity Financing are not available.

On the supplier side, the advice is that Nedcargo should prioritise offering Reverse Factoring to its suppliers due to the win-win situation. Suppliers could save €186,491.– in financing costs and free up €6.6 million in Net Working Capital by adopting Reverse Factoring from Nedcargo. Nedcargo could also benefit from offering Reverse Factoring to its suppliers by receiving a payment term extension. Dynamic Discounting should only be considered as a second best option if Reverse Factoring is not possible due to the suppliers being too small.

Most of the savings and additional Net Working Capital can be gained with the A customers and suppliers. The reason for this is that these companies are accountable for 80% of the total costs or revenue. In other words, 80% of the Net Working Capital and financial costs are related to these customers or suppliers. Therefore, Nedcargo should prioritise implementing Supply Chain Finance instruments with the largest customer and suppliers first.

Furthermore, the advice is that Nedcargo starts to offer Fixed Asset Financing to its suppliers. Because of the time it takes for the investment in a fixed asset to be returned, Nedcargo should only consider doing so with reliable suppliers that are frequently used (A suppliers). Nedcargo should also consider asking customers who make frequent use of Nedcargo its services to finance their fixed assets (A customers). A longer contract leads to a higher benefit for both parties.

Lastly, Inventory Financing could be an attractive solution for Nedcargo as it will offer an additional service to both customers and suppliers. Doing so will result in Nedcargo staying ahead of the competition. Furthermore, it will offer suppliers earlier payment, increase the Net Working Capital of the buyer and may also decrease inventory financing costs. Therefore, the advice is that Nedcargo will execute a pilot of Inventory Financing in order to determine its attractiveness.

Implementation

Fixed Assets Financing only requires different contract agreements and payments. The implementation of Reverse Factoring and Dynamic Discounting consist of four, more comprehensive steps; design, implementation, transaction and post-transaction. Since a change manager should be responsible for guiding Nedcargo and its employees through the changes. Lewin's change management model describes three steps of change.

The implementation of Reverse Factoring starts with the design phase. The buyer has to scout and select a financial institutions that provides the service which costs up to €1,000.-. PrimeRevenue Inc. and Taulia Inc. are two very well-known examples of Supply Chain Finance service providers. After scouting for a provider, the buyer will have to perform consulting sessions with its suppliers and the service provider. The consulting costs depend on the amount of consultancy sessions and may lead up to €100,000.–.

After the suppliers and service provider are on board, the implementation phase starts. First, contracts have to be made between the buyer, supplier, service provider and financial institution. The contract costs range from €10,000.– to €20,000.– and include costs for lawyers and accountants. After the contracts are in order, the buyer will have to invest in a suitable ICT system and has to set up the communication channels. These costs vary from €400,000.– to €1 million, depending on what is needed. However, in most cases, the service provider pays for the platform while the users (buyer and supplier) pay a fee for using the platform. After the entire set-up is complete, the service provider opens the channels for €1,500.– or less which allows for the link between buyer, supplier and the financial institution. The implementation phase is overseen by a change manager which will be discussed in the next paragraph.

Now that the implementation is complete, the transaction phase starts where the supplier uses the system to request early payment. From this point on, all costs are recurring and depend on the usage of the model. The supplier needs about 1 FTE (Full Time Employee, 36 hours) is needed in order to

arrange receiving payments with Reverse Factoring. The supplier pays a small fee for using the shared technological platform. All other costs in the transaction phase consist of the programme rate. The last phase is the post-transaction phase. After the transaction, the supplier will have to regularly manage its bank accounts which costs €50.– to €1,000.–. The documentation will also cost €50.– to €1,000.–. The buyer will make costs related to risk management and maintenance. Finalising the transactions will require 2 to 4 FTE. The post-transaction phase is overseen by a controller which will be discussed in the next paragraph.

In total, the minimum once-off costs for the implementation of Reverse Factoring are €410,000.– for the buyer and €750.– for the supplier. The maximum once-off costs would be €1,122,500.– for the buyer and €1,500.– for the supplier.

The implementation costs for Dynamic Discounting would be lower since there are no elaborate contracts. Furthermore, Dynamic Discounting is simpler than Reverse Factoring in terms of managing and control which would require less FTE, no commissions and less control. However, Dynamic Discounting does not create a win-win situation which will most likely result in either one of the parties to not accept the terms.

Change Management
In order to implement the changes successfully, the advice is that Nedcargo uses Lewin's Change Management model and assigns a change manager who is responsible for guiding the process of change. Communication and time are two key factors to success when it comes to change. All employees should be prepared for the changes and the management should answer any questions the employees might have. The changes should take place in a time period that is as short as possible, so that employees realise that the changes must be important for the future of the company. Lastly, the management must make sure that the changes are being used all the time so that employees do not fall back into the old routines.

Cost-Benefit
The implementation costs for Reverse Factoring with suppliers are €410,000.– to €1,122,500.– for Nedcargo. If Nedcargo were to invest in Reverse Factoring with the A and B suppliers, receiving a 6 day payment term extension would already free up €1.2 million in Working Capital and generate €1.2 million in perpetuity interest benefit which is €20,000.– in the first year. The suppliers could potentially save €186,000.– in financing costs per year and free up €5.8 million Working Capital.

On the customer side, the customer pays the investment for Reverse Factoring with Nedcargo. Nedcargo could potentially save €161,000.– in financing costs per year and free up €10.7 million Working Capital. Furthermore, the customer will benefit in terms of an interest benefit and additional Working Capital. A stronger buyer-supplier relationship may result in additional revenue for Nedcargo.

The exact cash benefit that can be gained with each model depends on the number of suppliers and customers with whom the models are implemented. Furthermore, the benefit depends on a lot of parameters such as interest rates, purchases and sales which are different for each customer or supplier. Because the cash benefit that can be gained is different for each unique situation, the advice is that Nedcargo should make use of the Excel model in order to calculate and consider the results with each customer and supplier.

Furthermore, the interest rate of Nedcargo changes every three months. Since the models may no longer be beneficial at certain interest rates, Nedcargo should monitor the interest rate every three months in order to determine whether or not a contract is still beneficial.

Lastly, by adopting Supply Chain Finance instruments from customers, Nedcargo could potentially increase its sales/revenue. As Reverse Factoring can create a win-win situation, customers will be more satisfied if they can apply the model with Nedcargo. Because of the increase in Net Working Capital for the customer and a better buyer-supplier relationship, the sales of Nedcargo may increase.

Preface

This report examines the Supply Chain Finance possibilities for Logistics Service Provider Nedcargo International B.V.

First, an introduction will be given on the company, the problem and the assignments scope and goal. Next, the current situation of Nedcargo will be described with the integrated logistics concept, financial ratios, Working Capital, Cash Conversion Cycle and ABC-analysis. Then, five possible Supply Chain Finance instruments will be discussed, namely: Dynamic Discounting, Reverse Factoring, Inventory Financing, Structured Commodity Financing and Fixed Assets Financing. After that, the recommendations for the new situation will be discussed with the strategy, instrument selection, implementation, change & control management and a cost-benefit analysis.

This report is commissioned by the Rotterdam University of Applied Sciences, the Windesheim University of Applied Sciences and Nedcargo International B.V. This report contains confidential information and is intended solely for the direction of Nedcargo, the external supervisor Mr L. Gelsomino, the school supervisor Ms H. M. van Raalte, the second reader Mr M. el Ouasghiri, the external reader Mr M. Dalmeijer and the intern Mr J. Klop. This report may only be published on the 'hbo-kennisbank' or used for internal school purposes without the appendices. All appendices are confidential.

When applying for this internship, I knew that the topic of Supply Chain Finance was out of the box and new, which I saw as an opportunity. The Bachelor Logistics and Economics was mainly focused on the flow of goods with only a little attention towards the information and financial flows. Even though I expected to learn a lot, I have learned more than I could have possibly wished for. I consider this internship to be a valuable and unique professional experience. Most importantly, were it not for others, I would not have learned as much as I have now. As Napoleon Hill said, 'No individual has sufficient experience, education, native ability, and knowledge to ensure the accumulation of a great fortune, without the co-operation of other people.'

That being said, I would like to thank:

- Mr D. J. Antvelink and Mr R. C. de la Houssaye, Chief Executive Officers at Nedcargo, for allowing me to perform my internship at Nedcargo.
- Ms J. M. van Lieshout, Chief Financial Officer at Nedcargo, for allowing me to perform my internship at Nedcargo and for her guidance during this internship.
- Ms H. M. van Raalte, Teacher and Graduation Coordinator at the Rotterdam University of Applied Sciences, for informing me about this internship possibility, for bringing me in contact with Mr H. Baltjes, and for her guidance during this internship.
- Mr L. M. Gelsomino, Senior Researcher Supply Chain Finance at the Windesheim University of Applied Sciences, for his guidance during this internship and for sharing his extensive knowledge on the topic of Supply Chain Finance.
- Mr K. Stam, Financial Controller at Nedcargo, for his daily time, guidance and knowledge during this internship.
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- Mr B. van Iperen, Warehouse Process Supervisor at Nedcargo, for his advice and a very inspiring conversation.
- Mr H. Baltjes, Programme Manager Supply Chain Finance at the Windesheim University of Applied Sciences, for selecting me as the intern to conduct this research.
- Mr R. de Vries, Educational Manager at the Rotterdam University of Applied Sciences, for the first contact with the Windesheim University of Applied Sciences about this internship possibility.
- All other employees of Nedcargo who have, in any way, contributed to this internship/research.

Rotterdam, June 7, 2017

Jurian Klop

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Definitions & Acronyms

This page contains a list of the main definitions and all acronyms used in this report. All acronyms are only used in the tables and figures in order to minimise making the tables unnecessarily large. The text in this report contains no acronyms as was requested by the direction of Nedcargo.

Definitions

Cash Conversion Cycle	The number of days it takes to convert the cash invested in products or services into turnover
Days Payable Outstanding	The number of days after which suppliers are paid for bought goods/services
Days Sales Outstanding	The number of days it takes to receive payment for sold goods/services
Operational Lead-time	The number of days between placing a supplier order and sending the sales invoice to the customer
Working Capital	The available cash for investment or paying off short term debt

Acronyms

%Overdue DPO	The percentage of overdue payments by Nedcargo to suppliers
%Overdue DSO	The percentage of overdue payments by customers to Nedcargo
AP	Accounts Payable which are the debtors
AR	Accounts Receivable which are the creditors
CCC	Cash Conversion Cycle
CCC PT	Cash Conversion Cycle based on the average Payment Terms
CODP	Customer Order Decoupling Point
DD	Dynamic Discounting
DPO	Days Payable Outstanding
DPO PT	Days Payable Outstanding based on the average Payment Term
DSO	Days Sales Outstanding
DSO PT	Days Sales Outstanding based on the average Payment Term
FAF	Fixed Assets Financing
IF	Inventory Financing
NWC	Net Working Capital based on the current assets and current liabilities
NOWC	Net Operating Working Capital based on the outstanding debtors and outstanding creditors
Operational LT	Operational Lead-time
Real CCC	Cash Conversion Cycle based on the average actual payments
Real DPO	Days Payable Outstanding based on the average actual payments
Real DSO	Days Sales Outstanding based on the average actual payments
RF	Reverse Factoring
SCF	Structured Commodity Financing
WADPO	Weighted Average Days Payable Outstanding based on the actual payments
WADPO PT	Weighted Average Days Payable Outstanding based on the Payment Term
WADSO	Weighted Average Days Sales Outstanding based on the actual payments
WADSO PT	Weighted Average Days Sales Outstanding based on the Payment Term

1. Introduction

In this chapter, an introduction will be given on the company, the problem, the assignment, scope and goals.

1.1. Company Introduction

The origin of Nedcargo starts with the establishment of Van Uden Logistiek B.V. in Rotterdam, the Netherlands, in 1848. Van Uden started by providing inland shipping on the Rhine, but as the years passed, the family owned business grew and started to provide more logistics services. The choice was made to specialise in the storage and distribution of preservable food and beverage products.

In 2000, Nedcargo International B.V. was founded, and shortly after, opened its first establishment in Rotterdam, the Netherlands, in 2001. Nedcargo grew over the years by specialising in forwarding, international transport and container transport by road, air and water. In 2002, Nedcargo and Van Uden started their co-operation, with Van Uden taking a minority interest in Nedcargo. Nedcargo also took over a number of activities from Van Uden.

In 2011, Nedcargo took over Van Uden, becoming a Logistics Service Provider known as the 'new style' Van Uden. In 2015, Nedcargo also became active in Belgium by taking over Eurobrokers N.V. Later, in 2016, they decided to change the name to Nedcargo International B.V. which consists of:

- Nedcargo Multimodal B.V. - the multimodal distribution of goods by means of two or more modalities.
- Nedcargo Logistics B.V. - the warehousing and distribution of products from producers, such as Nestlé, to retail distribution centres and retailers in the Benelux.
- Nedcargo Forwarding B.V. - the import and export of goods from producers across the globe.
- Nedcargo Logistics Belgium N.V. - all logistics activities in Belgium.

A full overview of the legal structure of Nedcargo can be found in Appendix I.

Currently, Nedcargo is an international Logistics Service Provider in the Benelux on the market of preservable food, beverage and retail products. Nedcargo offers a wide range of logistics services such as; multimodal transport, storage, distribution, customs regulations, risk management and Value Added Logistics. Nedcargo has a total of 260,000 m² in storage capacity, which is used to store over 280,000 pallets. With 841 employees, Nedcargo delivers 30,000 unique products, on 320,000 pallets, to 25,000 addresses every year (Nedcargo International B.V., 2017).

1.2. Problem Description

Improving the supply chain has been essential for companies for years, mostly focused on improving the flow of goods and information. Due to globalisation and the increasing complexity of supply chains, optimising the financial flows has a major impact on the profitability of a supply chain and is becoming more important.

Especially since the financial crisis, companies struggle to find the financial means to finance their business activities. This phenomenon is caused by several developments in the micro, meso and macro environment of a company. But first, the Net Working Capital and Cash Conversion Cycle are explained (Gelsomino, 2017) (Stammers, 2015) (Ronald de Boer, 2015).

1.2.1. Net Working Capital

The available cash for investment is calculated as Net Working Capital, a metric for liquidity (Ronald de Boer, 2015) (Investopedia, 2017) (Heezen, 2012).

Net Working Capital = Current Assets – Current Liabilities

- *Current Assets = All assets what can be expected to be turned into cash within one year*
- *Current Liabilities = All debts by the company which are due within one year*

A negative Net Working Capital means that a company will have problems paying its short term loans, thus risking bankruptcy. A positive Net Working Capital means that a company has enough funds to pay short term loans, and has spare money to invest in products or services (Ronald de Boer, 2015).

1.2.2. Cash Conversion Cycle

The amount of time it takes to convert the cash invested in products or services into turnover is calculated using the Cash Conversion Cycle, see Figure 1.1. In order to increase investment potential, Days Sales Outstanding or Days Inventory needs to reduce or the Days Payable Outstanding needs to increase. Doing so will shorten the Cash Conversion Cycle, thus lowering the time it takes to receive a Return on Investment and increasing the Net Working Capital availability (Ronald de Boer, 2015) (Heezen, 2012).

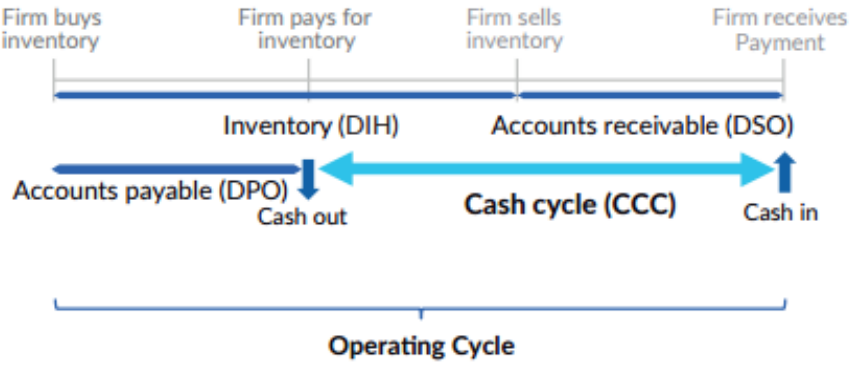

Figure 1.1 Cash Conversion Cycle

Cash Conversion Cycle = Days Sales Outstanding + Days Inventory – Days Payable Outstanding

- *Days Sales Outstanding = Number of days it takes to receive payment for sold goods/services*
- *Days Inventory = Number of days products are kept in stock*
- *Days Payable Outstanding = Number of days after which suppliers are paid for bought goods/services*

1.2.3. Micro, Meso and Macro

The micro, meso and macro analysis is used to determine which internal and external factors influence a company, see Figure 1.2. The economic problems that occur in individual businesses are caused by its supply chain. Therefore, the micro, meso and macro analysis is used.

Micro – Individual Business

On a micro level, fluctuations in demand increase which leads to companies keeping a higher safety stock. The investment in stock requires Net Working Capital and results in a longer Cash Conversion Cycle due to more Days Inventory. In turn, the longer Cash Conversion Cycle means that more Net Working Capital is needed to invest. The Net Working Capital could be financed with a loan, but loaning money is a risk for banks, especially when the loan is for Small and Medium Enterprises. Even if the bank grants these companies a loan, the interest rate will be much higher. Therefore, the investment needs to come from Net Working Capital, but due to developments in the meso environment, the Net Working Capital availability is lowered as well (Ronald de Boer, 2015) (Verhage, 2005).

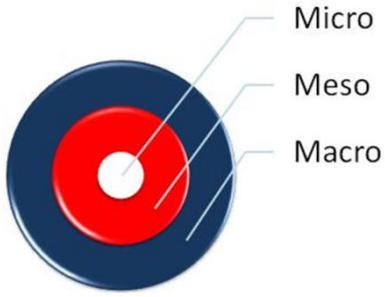

Figure 1.2 Micro, Meso, Macro

Meso – Supply Chain

On a meso level, Porter's Five Forces model can be used to explain the problem, see Figure 1.3. Porter's Five Forces model gives the best view of five different aspects which cause the problems to occur.

- Suppliers:

The suppliers of Nedcargo are small suppliers which Nedcargo hires to transport goods. Statistics show that there are almost 8000 companies in the Netherlands that offer transport services and this number is only increasing, see Appendix II. The service offered by the suppliers is not unique. Therefore, the suppliers have little bargaining power because they are small businesses, and Nedcargo can

Figure 1.3 Porter's Five Forces Model

easily replace them with other suppliers (Centraal Bureau voor de Statistiek, 2017) (Mindtools, 2017) (Marcus, 2015).

- Buyers:

The buyers of Nedcargo are the producers of goods who hire Nedcargo to store and distribute their goods. The producers are companies such as Heineken, Nestlé, Remia and Friesland Campina. Due to the number of Logistics Service Providers, it is easy for the producers to replace Nedcargo. Therefore, the buyers have a lot of bargaining power over Nedcargo (Centraal Bureau voor de Statistiek, 2017) (Mindtools, 2017) (Marcus, 2015).

- Competition:

There are an increasing number of competitors in the market of Logistics Service Providers. Because of the high level of competition, it is important for Nedcargo to distinguish itself by providing a service that no one else does (Centraal Bureau voor de Statistiek, 2017) (Mindtools, 2017) (Marcus, 2015).

- Substitutes:

The services provided by Nedcargo are not unique. Instead of hiring Nedcargo, the customers can decide that they will perform the logistics activities themselves rather than outsourcing them to Nedcargo (Mindtools, 2017) (Marcus, 2015).

- Barriers:

The barriers for joining the market of Logistics Service Providers are not high. While a new entrant needs to invest in materials such as trucks by either using savings or a loan, the current interest rate at banks is low with a percentage of 2% to 8.5% (Rabobank, 2017) (Mindtools, 2017) (Marcus, 2015).

- Conclusion

The buyers of Nedcargo have a lot of power and thus can bargain for a longer payment term to Nedcargo. Nedcargo has a lot of power over its suppliers and can therefore bargain for a longer payment term to the suppliers. The problem however is that the suppliers are small businesses that cannot wait for the payment this long. This results in either Nedcargo having to pay the suppliers earlier with money they do not have because the buyers have not paid them yet. Or, the buyers have to pay Nedcargo earlier while they do not have the money for selling the products yet. The additional Net Working Capital needed to finance the problem cannot be used for innovation, while innovation is what brings customer value in the long term. The extended payment terms lead to a longer Cash Conversion Cycle, require more Net Working Capital and may result in bankruptcy for the suppliers (Ronald de Boer, 2015) (Verhage, 2005).

Macro – Economy

On a macro level, the economy is endangered by these developments. Even though there are a lot of suppliers, forcing bankruptcy for Small and Medium Enterprises will greatly increase unemployment rates. Furthermore, the lack of liquidity or Net Working Capital results in less investment and innovation potential, thus slowing economic growth (Ronald de Boer, 2015) (Verhage, 2005).

1.3. Assignment Background

In order for companies to overcome the financial challenges they face, Supply Chain Finance was introduced. The definition as stated by the Supply Chain Finance Community:

'Supply Chain Finance is an approach for two or more organisations in a supply chain, including external service providers, to jointly create value through the means of planning, steering, and controlling the flow of financial resources (Ronald de Boer, 2015)*.'*

Supply Chain Finance is a relatively new concept with extremely high potential. The Dutch government realised this, which is why Henk Kamp, Dutch Minister of Economic Affairs, announced the 'BetaalMeNu' programme. The aim of this government subsidised programme is that large buyers start to offer Supply Chain Finance services to Small and Medium Enterprises in order to overcome the financial challenges they face. Logistics Service Providers may also play a significant role in the field of Supply Chain Finance but are not aware of its potential. Therefore, the Windesheim University of Applied Sciences, a leading knowledge institution on the topic of Supply Chain Finance, started a partnership with four other universities in Europe (Politecnico di Milano in Italy, St. Gallen in Switzerland, Fraunhofer in Germany and Warwick in the United Kingdom). Windesheim leverages the knowledge of this pan European project to provide corporates and Logistics Service Providers with

the correct information and tools that can support decisions and increase awareness of Supply Chain Finance (Windesheim University of Applied Sciences, 2017) (Stammers, 2015) (Gelsomino, 2017).

Windesheim works with interns while performing research. Over the past few months, Marc van den Boogaard, student at the Nyenrode Business University, performed research on the Supply Chain Finance possibilities for Nedcargo with guidance from the Windesheim University of Applied Sciences. The aim of this research was to find out which Supply Chain Finance instruments could potentially be offered by Nedcargo to their customers and/or suppliers. To answer this, five sub questions had to be answered:

1. Is Nedcargo willing to offer Supply Chain Finance services?
2. Does Nedcargo have the knowledge concerning Supply Chain Finance services?
3. Does Nedcargo have the required level of digitalisation to support Supply Chain Finance services?
4. Does Nedcargo have enough financial capabilities to offer Supply Chain Finance services to its suppliers?
5. How does Nedcargo evaluate potential offerings of Supply Chain Finance, what are tangible results?

In order to answer these questions, a total of 17 employees of Nedcargo, divided into subgroups, were interviewed, see Appendix III. Each interviewee was asked a series of questions regarding the willingness, knowledge, digitalisation, financials and results. All the interview questions can be found in Appendix IV (Boogaard, 2017).

The results were that:

- Each subgroup is willing to adopt innovations, collaborate and learn.
- Only a small portion of the management team subgroup has the knowledge to implement Supply Chain Finance services, the rest of the interviewees lack the required knowledge. The lack of knowledge is one of the main bottlenecks for the adoption of Supply Chain Finance services. The sharing of knowledge is also lacking which is a second bottleneck. In order to successfully adopt Supply Chain Finance services, collaboration between the finance, procurement and logistics departments is a must.
- A large portion of the interviewees think that the digitalisation is outdated. Furthermore, the invoices lack standardisation due to customers having different systems, profiles and formats.
- The access to funds is considered good by the interviewees. A great deal of the interviewees has no knowledge regarding the Net Working Capital. Implementation of Supply Chain Finance services will greatly improve the cash flows and Net Working Capital availability.
- The results were that all subgroups are aware of risks and benefits that come with the implementation of Supply Chain Finance services. However, the risks are common and do not exclude any specific Supply Chain Finance instruments. As to the instruments, the interviewees see Reverse Factoring and Inventory Financing as most promising.

The research at Nedcargo led to five Supply Chain Finance instruments which could potentially be offered or adopted by Nedcargo:

1. Dynamic discounting
2. Reverse factoring
3. Inventory financing
4. Structured commodity financing
5. Fixed assets financing

(Boogaard, 2017)

1.4. Assignment, Scope & Goal

The aim of the assignment is to analyse Supply Chain Finance practises, in the context of Nedcargo, under the guidance of Mr Gelsomino throughout a period of 20 weeks. More specifically, the assignment will leverage previous work, which identified five Supply Chain Finance instruments, that can be potentially be offered by Nedcargo, based on their current resources and capabilities; Dynamic Discounting, Reverse Factoring, Inventory Financing, Structured Commodity Financing and Fixed Assets Financing. A mind map is made in order to visualise the core topic of the assignment and all subtopics around it, see Appendix V. Ultimately, this assignment will:

1. Identify which Supply Chain Finance instrument(s) is/are most suitable,
2. For which parties (customers and/or suppliers),
3. And how it is going to be implemented in the supply chain of Nedcargo.

The goal of the assignment is to optimise the cash flow and cash benefit of Nedcargo and its supply chain, thus improving the Cash Conversion Cycle and Net Working Capital. The scope is on Nedcargo in the Netherlands, Belgium is out of the scope of this project.

1.5. Research Question

In order to limit the assignment scope and boundaries and to write an advice report, the following research question is SMART (Specific, Measureable, Acceptable, Realistic, Time bound) formulated:

'Which substantiated advice can be given to Nedcargo International B.V., in which the Supply Chain Finance instrument(s) and the parties with whom the Supply Chain Finance instrument(s) should be implemented are selected, that will optimise the financial flows of all parties in the supply chain of Nedcargo, thus improve/shorten the Cash Conversion Cycle and increase the Net Working Capital availability, and how should the selected Supply Chain Finance instrument(s) be implemented?'

The sub- and operational questions related to the research question can be found in Appendix VI.

1.6. Structure

First, in chapter 2, the theoretical framework will be discussed. The theoretical framework further explains the types of research that have been performed, the sources and data that have been used, the timeframe and models. In chapter 3, the current situation of Nedcargo will be discussed with the integrated logistics concept, financial ratios, Working Capital, Cash Conversion Cycle and ABC-analysis. Then, in chapter 4, the five possible solutions Dynamic Discounting, Reverse Factoring, Inventory Financing, Structured Commodity Financing and Fixed Assets Financing will be discussed based on the process, advantages, disadvantages, possibilities and cash benefit. Lastly, in chapter 5 the new situation will be discussed with the strategy, instrument selection, implementation, change & control management and a cost-benefit analysis. The structure of the report can also be seen in Figure 1.4 (Klop, 2017).

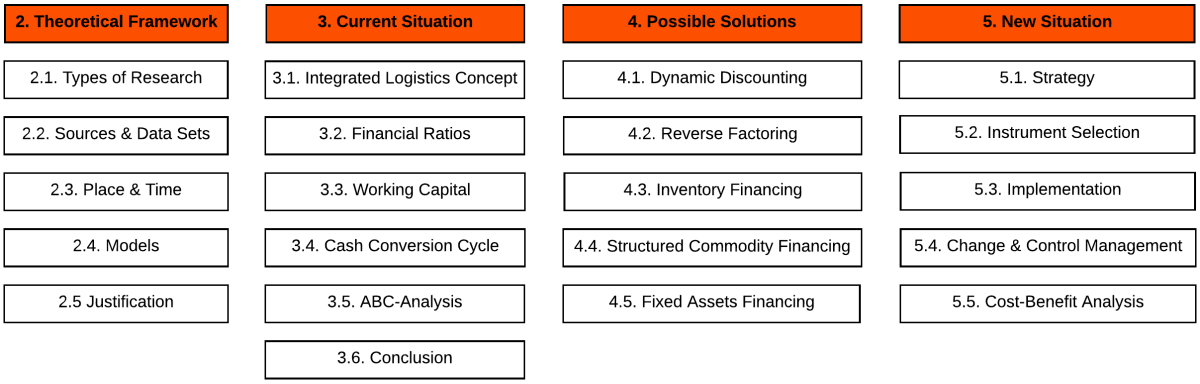

Figure 1.4 Structure of the Report

2. Theoretical Framework

In this chapter, the theoretical framework will be discussed. The theoretical framework describes the types of research, sources, data, time and model choices of the research.

2.1. Types of Research

Different types of research are used in order to answer the research question. The types of research conducted for each sub question will be now discussed.

1. Why is this research being conducted?

In order to explain why this research is being conducted, qualitative research has been performed. This was done in the form of desk research with case studies on the relevance of Supply Chain Finance. Furthermore, field research has been conducted with focus group conversations in order to understand the view on the topic of Supply Chain Finance of Nedcargo.

2. What does the previous research say?

Desk research in the form of case studies was held in order to analyse the previously conducted research. This was done by reading the final report of Marc van den Boogaard and discussing the outcomes with field research in a focus group.

3. What is the current situation of Nedcargo?

The current situation of Nedcargo was analysed by performing both qualitative and quantitative research. Qualitative desk research was held in the form of case studies in order to gather information on the strategy, Cash Conversion Cycle, Working Capital and financial ratios. Furthermore, field research in the form of a focus group was performed in order to discuss the calculations and outcomes. Quantitative desk research was held in order to analyse the data sets of Exact Financials and the annual reports of Nedcargo. These data sets and reports were used to calculate the financial ratios, Cash Conversion Cycle, working capital and ABC-analysis.

4. Which Supply Chain Finance possibilities are there for Nedcargo?

The future Supply Chain Finance possibilities for Nedcargo were both qualitatively and quantitatively researched. First, information on each of the Supply Chain Finance instruments was gathered through the means of desk research with case studies, and field research with a focus group. After the basics of each model were known, the quantitative research was conducted by discussed the calculations and outcomes of each model. Furthermore, quantitative desk research was held in order to calculate the cash benefit and impact on the working capital.

5. Which Supply Chain Finance instrument(s) should be implemented?

The recommended situation for Nedcargo also consists of both qualitative and quantitative research. Qualitative desk research was conducted in the form of case studies in order to gather data on the implementation of Supply Chain Finance models. Since the number of sources is scarce, field research was also held in the form of a focus group. After that, quantitative research was performed by calculating the costs and benefits of the Supply Chain Finance solutions.

2.2. Sources & Data Sets

The qualitative field research focus group discussions mostly came from four people:

- Mr L. M. Gelsomino, Senior Researcher Supply Chain Finance at the Windesheim University of Applied Sciences
- Ms J. M. van Lieshout, Chief Financial Officer at Nedcargo
- Mr K. Stam, Financial Controller at Nedcargo.
- Mr A. Nederlof, Finance Manager at Nedcargo

The qualitative desk research case studies mostly came from four articles/books:

- Boogaard, M. v. (2017). *Supply Chain Finance & Logistic Service Provider.*
- F. Caniato, L. G. (2015). *The Cost of Supply Chain Finance: a Total Cost of Ownership Approach.* Milan: Politecnico di Milano School of Management.
- Heezen, A. (2012). *Bedrijfseconomie voor het besturen van organisaties.* Houten: Noordhoff Uitgevers. Retrieved 2017
- Ronald de Boer, M. v. (2015). *Supply Chain Finance, its Practical Relevance and Strategic Value.* Almere: Supply Chain Finance Community.

For the quantitative desk research of the financial ratios, the annual reports used for the financial ratio analysis are those of the years 2015 and 2016. The choice was made to use more than one annual report since showing the changes over a period of three years gives a better understanding of the changes Nedcargo is going through.

For all other quantitative desk research, the data sets for the working capital and Cash Conversion Cycle calculations are generated with Exact Financials and Softpak which include all data of the year 2016. The choice was made to analyse the data of the most recent and entire year since seasonality may otherwise corrupt the data. A more detailed discussion on the data sets used for the Cash Conversion Cycle and working capital is included in the specific paragraphs.

2.3. Place & Time

The research has been conducted over a period of five months, starting in February 2017 and ending in June 2017. Most of the research has been conducted at the financial department of Nedcargo in Rotterdam or the headquarters of Nedcargo in Waddinxveen.

2.4. Models

In order to analyse the problem, the following models and theories have been used.

2.4.1. Micro, Meso, Macro

The micro, meso, macro analysis is used in order to described a company its internal (micro), supply chain (meso) and economic (macro) environment. The aim of the analysis is to show which market circumstances should be taken into account. The Micro, Meso, Macro model is used because it shows how small problems in individual businesses, are caused by larger corporates in a supply chain, which leads to economic problems.

2.4.2. Porter's Five Forces Model

Both the micro and meso circumstances can be directly or indirectly influenced by a company. Especially since Supply Chain Finance requires collaboration between two or more parties in a Supply Chain, the meso level is described using Porter's Five Forces model. Porter's Five Forces model is used in order to explain how much power a company has in a supply chain. The power is influenced by suppliers, buyers, substitutes, competitors and barriers to new entrants. The model further explains why larger corporates and buyers are able to extend payment terms.

2.4.3. Integrated Logistics Concept

Since the implementation of Supply Chain Finance will influence Nedcargo, the Logistics Concept is used in order to describe the basics on strategy, network, planning & control, ICT, organisation and Critical Performance Indicators. While the strategy and Critical Performance Indicators are most important, the other topics of the Integrated Logistics Concept help giving a better understanding of the company and data sets.

2.4.4. Working Capital

The Working Capital is calculated in order to see if Nedcargo is able to pay for its short term loans or has investment potential. Four out of the five selected Supply Chain Finance instruments aim at improving the Net Working Capital availability. Therefore, calculating the current en future Net Working Capital is crucial to explaining the impact that each model has.

2.4.5. Cash Conversion Cycle

The Cash Conversion Cycle is calculated in order to see how long it takes for Nedcargo to turn the invested costs into revenue. Four out of the five selected Supply Chain Finance instruments aim at improving the Cash Conversion Cycle through earlier payment. Therefore, calculating the current en future Cash Conversion Cycle, and the costs related to it, is crucial to explaining the impact of each model.

2.4.6. ABC-Analysis

In order to determine which customers and suppliers contribute most to the business of Nedcargo, an ABC-analysis is made. The ABC-analysis is used to further substantiate the conclusions of Porter's Five Forces model. The customers have bargaining power over Nedcargo which allows them to extend payment terms. Furthermore, the ABC-analysis gives a clear view of the scale of all customers and suppliers. This forms the basis of selecting with which suppliers and customer certain Supply Chain Finance solutions should be implemented.

2.4.7. Supply Chain Finance Instruments

The five solutions (Dynamic Discounting, Reverse Factoring, Structured Commodity Financing, Inventory Financing and Fixed Assets Financing) can either be offered to suppliers or customers, or can be adopted from suppliers or customers. These models were selected since the aim of this research is to improve/shorten the Cash Conversion Cycle and increase the Net Working Capital availability, thus focusing on operational Supply Chain Finance solutions. Only Fixed Assets Financing is a tactical solution which shows how the Net Working Capital that is freed up can be used to invest and improve supply chain relations.

2.4.8. Lee's Matched Strategies Matrix

Lee's Matched Strategies matrix has a lot of similarities with, and combines Fisher's Supply Chain matrix and Christopher's Global Supply Chain matrix. Furthermore, the strategy choice is based on demand characteristics and supply characteristics of a company. Since Supply Chain Finance relates to all parties in the supply chain, involving both the demand and supply is crucial to selecting the right strategy.

2.4.9. Lewin's Change Management Model

The change management model of Lewin is designed to guide companies through the stages of change which consists of unfreezing, changing and refreezing. There are two key factors to success when it comes to change, which are time and communication. This model was chosen since applying the model in practise in the past has proven to be very effective.

2.5. Justification

The links between each of the models can be found in Figure 2.1. The Micro, Meso, Macro analysis explains the problem in general. The problem is further explained and substantiated by using Porters Five Forces model.

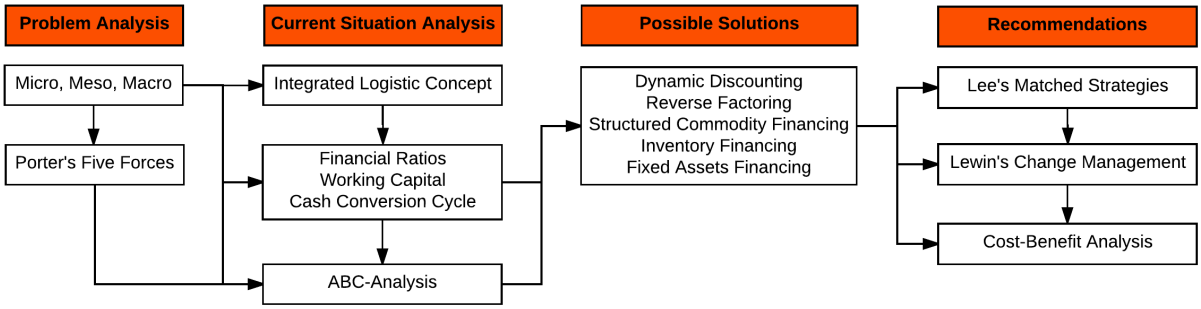

Figure 2.1 The Relationships Between Each of the Selected Models

After creating a clear view of the problem, a general analysis of the business of Nedcargo is used to select the Critical Performance Indicators that are involved in finance. The Critical Performance Indicators are then calculated as the financial ratios, working capital and Cash Conversion Cycle. The ABC-analysis is used to further substantiate the conclusions of Porter's Five Forces model by showing how dependent Nedcargo is on its suppliers and customers.

With the current situation analysed, the five Supply Chain Finance models are further investigated. For each model, the impact on the working capital and Cash Conversion Cycle is calculated. These calculations make it possible to compare the current en future situation. The ABC-analysis serves as a way of selecting which customers or suppliers are most important to Nedcargo. The more important the customer or supplier, the higher the priority of adopting or offering Supply Chain Finance services.

With a clear view of the impact on the Cash Conversion Cycle and working capital of each model, the supply chain strategy of Nedcargo is used to determine where Nedcargo its focus should be and which models should be implemented. In order to do so, Lewin's Change Management model is used. Lastly, all recommendations are substantiated with a cost-benefit analysis.

3. Current Situation

In this chapter, the current situation of Nedcargo will be discussed with the integrated logistics concept, a financial analysis, the working capital, Cash Conversion Cycle and ABC-analysis.

3.1. Integrated Logistics Concept

This integrated logistics concept is used as a tool to describe a business in general. The model focusses on the strategy, network, planning & control, ICT, organisation and Critical Performance Indicators of a company, see Figure 3.1. The integrated logistics concept is a basic method to show how certain decisions will influence a business. Since the aim of this research is to improve the current situation, the integrated logistics concept is used for structuring the analysis (Goor, 2012).

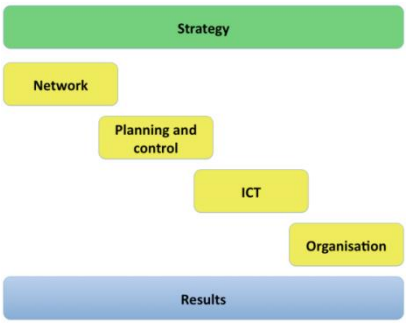

Figure 3.1 Integrated Logistics Concept

3.1.1. Strategy & Targets

In 2015, Nedcargo re-evaluated its strategy and set new goals for 2015-2020:

- Core Purpose: Safely and efficiently deliver foods, drinks and retail products.
- Ambition: Deliver 100.000 unique products | to 500.000.000 consumers | without waste.
- Strategy: Customers evaluate the services with a 9+ | Safety and quality in all the activities | Add value for the customer by offering technical and efficient logistic solutions.
- Value proposition: Wasteless Supply Chain!

(Nedcargo International B.V., 2016)

3.1.2. Network

The operational form of Nedcargo is described as a network, a combination of convergence and divergence. In order to clarify this, an example will be used. A customer places an order for transport from Rotterdam to New York. Nedcargo purchases several services for this order, such as truck transport and deep-sea transport, at different suppliers. These services are combined into one product for the customer (convergence). Now, another customer also needs transport to New York. Nedcargo can use the same deep-sea supplier for multiple customer orders (divergence).

The same can be said for the invoicing process. If Nedcargo receives 10 purchase invoices from one supplier, those 10 invoices are combined and paid all at once (convergence). Those 10 purchase invoices include actions for different customers. Therefore, the combined invoices are split across the customers (divergence). Understanding this process helps to understand the invoicing data of Nedcargo and how this data is generated (Goor, 2012) (Stam, 2017) (Nederlof, 2017).

3.1.3. Planning & Control

The Customer Order Decoupling Point indicates when a company switches from performing activities based on a planning, to performing activities based on actual customer orders. For Nedcargo, the Customer Order Decoupling Point depends on the business. Stock is kept at the warehouses of Nedcargo and distributed to the customer warehouse or stores based on customer orders. This means that the Customer Order Decoupling Point is 1/2 for the customer, producing for local or central stock. The transportation service offered by Nedcargo is assembled on order for the customer, Customer Order Decoupling Point 3. Nedcargo has a base of suppliers. Based on the customer order, suppliers are assembled to perform the requested service. The general process order related to invoicing can be found in Figure 3.2 (Goor, 2012) (Stam, 2017) (Nederlof, 2017).

Customer Order	The customer orders a service from Nedcargo
Dossier	Nedcargo makes a dossier for the customer order in the operational system
Purchasing	Nedcargo purchases services at the supplier(s)
Invoicing	Nedcargo receives the purchasing invoices from the supplier(s) and sends the sales invoice to the customer
Payments	Nedcargo pays the supplier(s) and receives payment from the customer

Figure 3.2 General Financial Process Nedcargo

3.1.4. ICT

The system used by Nedcargo for the purchasing and sales invoices is Softpak or the Enterprise Resource Planning system. All purchases made for one customer are put in one file. After the file is complete, the sales invoice is sent to the customer. Once a day, the sales invoices are uploaded to Exact Financials which is used to keep track of the entire financial status of Nedcargo. All costs invoices such as personnel, buildings and electricity are put in Scansys. These invoices are verified and directly uploaded to Exact Financials (Softpak B.V., 2017) (Exact Holding B.V., 2017) (Scan Sys B.V., 2017) (Stam, 2017) (Nederlof, 2017) (Goor, 2012).

3.1.5. Organisation

The organisational structure of Nedcargo consists of several business units, namely; logistics, forwarding and multimodal. Each of these business units has its own organisational structure, which is supported by shared services such as Human Resources (Nedcargo International B.V., 2017) (Goor, 2012).

3.1.6. Critical Performance Indicators

In order to measure a business performance, Critical Performance Indicators can be monitored. SCOR makes a distinction between five performance attributes which consist of metrics. For finance related activities, the Critical Performance Indicators in Table 3.1 can be used. Each of these metrics will be discussed in this chapter (Supply Chain Counsil, 2012) (Goor, 2012).

Table 3.1 SCOR Performance Metrics

Performance	Code	Metric	Calculation
Cost	**CO.1.001**	**Total Costs To Serve**	**-**
Asset Management Efficiency	**AM.1.1**	**Cash-To-Cash Cycle Time**	**DSO + DIH - DPO**
	AM.2.1	Days Sales Outstanding	Payment Date - Invoice Date
	AM.2.2	Inventory Days Of Supply	Lead-time
	AM.2.3	Days Payable Outstanding	Payment Date - Invoice Date
Asset Management Efficiency	**AM.1.2**	**Return On Supply Chain Fixed Assets**	**(Revenue - Costs To Serve) / Fixed Assets**
	AM.2.4	Supply Chain Revenue	-
	AM.2.5	Supply Chain Fixed Assets	-
Asset Management Efficiency	**AM.1.3**	**Return On Working Capital**	**(Revenue - Costs To Serve) + (Inv. + Debt. - Cred.)**
	AM.2.6	Accounts Payable	Creditors
	AM.2.7	Accounts Receivable	Debtors
	AM.2.8	Inventory	Inventory

3.2. Financial Ratios

To get a better understanding of the financial position of Nedcargo, a general financial analysis is made. The financial analysis uses financial ratios in regards to profitability, solvency and the debt. Liquidity ratios will be discussed in the next paragraph.

All the parameters for the calculations are based on the annual reports of 2015 and 2016, see Appendix VII. The financial ratios and their calculations can be found in Appendix VIII (Nedcargo International B.V., 2016) (Nedcargo International B.V., 2017) (Heezen, 2012) (R. Loth, 2017) (Rabobank, 2017) (Nedcargo International B.V., 2016) (Nedcargo International B.V., 2017).

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3.2.1. Profitability

The return on capital has decreased from 7.47% in 2014 to 4.60% in 2016. The change is caused by the growing amount of capital. A higher percentage is always preferred as it shows how well capital is used to generate a profit. However, the growing amount of capital indicates the growth of Nedcargo.

The return on equity grew a lot in 2015 from 11.54% to 78.78% due to the fast growing net profit. The slight decrease in 2016 has little effect. The return on equity is much higher than the 0.15% interest at banks, meaning that investing equity in Nedcargo is very profitable for the investors.

The costs of (interest bearing) debt decreased a lot in 2015 and is below the norm of 5% to 10%. The fact that the costs of debt are lower indicates that Nedcargo has a reasonable creditworthiness at the bank which allows them to loan against slightly lower interest rates.

The return on assets grew from 0.07% in 2014 to 2.88% in 2016. The increasing return on assets shows that assets are managed efficiently in order to make a profit. These results can also be seen in the increasing profit margins (Heezen, 2012) (R. Loth, 2017).

3.2.2. Solvency & debt

The solvency of Nedcargo is increasing which means that equity is being invested instead of debt. This causes the debt ratio and debt-equity ratio to decrease. The lower these numbers, the more equity is invested instead of debt. More equity investment results in a lower debt and no interest is paid over de equity. Since Nedcargo was founded in 2000, and has grown rapidly ever since, a high debt is understandable.

The capitalisation ratio of Nedcargo is slightly decreasing. However, the amount of debt compared to the equity is high, which indicates that creditors could restrict actions and that profitability is lowered by interest costs. Nevertheless, the interest coverage ratio of 3.48 lies between the norm and indicates that Nedcargo is able to pay the interest costs (Heezen, 2012) (R. Loth, 2017).

3.3. Working Capital

The Working Capital is calculated in order to see if Nedcargo is able to pay for its short term loans. A distinction is made between logistics, forwarding and multimodal, see Appendix IX. The Working Capital can be calculated in two ways (Heezen, 2012) (Gelsomino, 2017).

Net Working Capital = Current Assets – Current Liabilities

- *Current Assets = All assets which can be expected to be turned into revenue within one year*
- *Current Liabilities = All debts by the company which are due within one year*

Net Operating Working Capital = Outstanding Debtors – Outstanding Creditors

- *Outstanding Debtors = All outstanding account receivable*
- *Outstanding Creditors = All outstanding accounts payable*

3.3.1. Net Working Capital

The Net Working Capital of Nedcargo increased from €15,000.– in 2014 to €438,000.– in 2015, resulting in a current ratio of 1.01. In 2016, the Net Working Capital decreased to -€190,000.–, resulting in a current ratio of 1. The norm for the current ratio lies between 1 and 1.5. A ratio higher than 1.5 would indicate that the available Net Working Capital is not being invested, while this could result in a higher Return on Investment. However, this does not necessarily mean that Nedcargo is not liquid. The liquidity of a company strongly depends on how long it takes for a company to collect its current assets. Therefore, no conclusions can be drawn without involving the Cash Conversion Cycle (Heezen, 2012) (R. Loth, 2017).

3.3.2. Net Operating Working Capital

By extracting and reviewing all outstanding debtors and creditors of Nedcargo on 31-12-2016 from Exact Financials, the Net Operating Working Capital is calculated, see Table 3.2 (Exact Holding B.V., 2017) (Groenendijk, Excel 2013, 2014) (Groenendijk, Databases & Access 2013, 2014) (Klene-Langerak, 2017) (Heezen, 2012) (R. Loth, 2017).

Table 3.2 Net Operating Working Capital

Company Name	Debtors	Creditors	NOWC
Logistics	€ 10.873.085	€ -5.476.769	€ 5.396.316
Forwarding	€ 2.485.103	€ -1.489.174	€ 995.929
Multimodal	€ 1.853.566	€ -1.166.355	€ 687.211
Other	€ -	€ -215.513	€ -215.513
Total	**€ 15.211.754**	**€ -8.347.811**	**€ 6.863.944**

The original dataset includes intercompany transactions. Therefore, all intercompany transactions are removed from the dataset, see Appendix X. The excise revenue and costs of Nedcargo Excise Services B.V. (Administration number 540) are cross posted to customers. After the customers have paid Nedcargo, Nedcargo pays the excise costs to the tax authorities. The sum is only included in the debtors data and not the creditors data, therefore, the excise costs are removed.

Since the Net Operating Working Capital is often seen as unreliable, because it is a moment in time, the Net Operating Working Capital of each month can be found in Figure 3.3. A more detailed overview of the debtors and creditors can be found in Appendix XI.

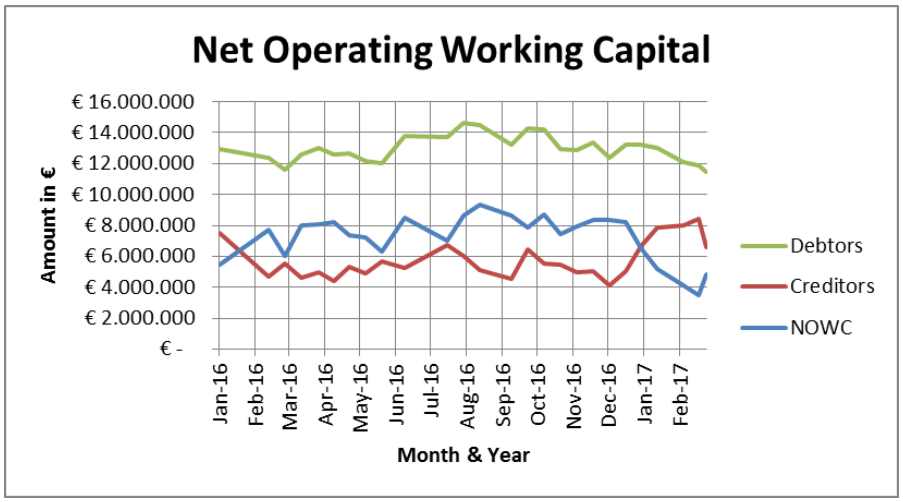

Figure 3.3 Net Operating Working Capital Fluctuation

As the figure shows, the Net Operating Working Capital is relatively stable over the year, except for seasonality during the summer start in June and in December during the holidays. The sudden increase in creditors in December is caused by Nedcargo keeping the month open longer for invoices, instead of closing it. Normally, the previous month is closed after a while, and all remaining invoices of the previous month are added to the current month. However, at the end of the year, the official method is used where the month is kept open longer, adding more purchase invoices from December, before closing the month. Furthermore, creditors are also paid later than usual (Nederlof, 2017).

The debtors of Nedcargo are approximately €12.9 million throughout the year. This means that Nedcargo could potentially free up €12.9 million in Net Working Capital. The creditors are approximately €5.7 million throughout the year. This means that suppliers could potentially have an additional €5.7 million in Net Working Capital. But, since this data is still related to a moment in time, the best indication of the trapped Net Working Capital can be calculated with the Cash Conversion Cycle (Heezen, 2012) (Ronald de Boer, 2015).

3.4. Cash Conversion Cycle

The Cash Conversion Cycle is calculated in order to see how long it takes for Nedcargo to turn the invested costs into revenue. Again, a distinction is made for logistics, forwarding and multimodal. Since Nedcargo holds no inventory but has a delay between placing an order at the supplier and sending the invoice to the customer, the Days Inventory is reformulated as Operational Lead-time (Heezen, 2012) (Ronald de Boer, 2015) (Gelsomino, 2017) (Stam, 2017) (Exact Holding B.V., 2017) (Softpak B.V., 2017) (Groenendijk, Excel 2013, 2014) (Quaadgras, 2006) (Groenendijk, Databases & Access 2013, 2014)

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Cash Conversion Cycle = Days Sales Outstanding + Operational Lead-time – Days Payable Outstanding

- *Days Sales Outstanding = Number of days it takes to receive payment for sold goods/services*
- *Operational Lead-time = Number of days between giving an order for an operation to a supplier and sending the sales invoice to the customer*
- *Days Payable Outstanding = Number of days after which suppliers are paid for bought goods/services*

Several problems/exceptions occur when analysing the dataset:

1. Since the 31st of May 2016, Nedcargo registers all invoices and payments for Nedcargo forwarding and Nedcargo multimodal in Exact Financials. Before that, all invoices and payments of forwarding and multimodal were registered in Softpak. Therefore, two datasets are extracted from the database, one from Softpak and one from Exact Financials. Because of the data being split between these systems, the datasets first have to be combined based on the invoice number.

2. The dataset includes intercompany transactions. In order to get a better view of the debtors and creditors alone, all intercompany transactions are removed from the datasets.

3. The payment date of several invoices is set to #N/A since these invoices have not yet been paid. The sum of these invoices equals the Net Operating Working Capital. If the outstanding invoices with payment date #N/A are not removed, Excel is unable to make a PivotTable. If the payment date for outstanding invoices is guessed, the data will be contaminated with unreliable data. Therefore, the choice is made to remove the invoices which have not been paid yet.

4. The payment date of several invoices is set before the invoice date. These payments are paid in advance while the invoice has not yet been received. Once the invoice is received, the payment is linked to the invoice. However, the payment date is set to the date of linking the invoice to the payment, and not to the date of the payment itself.

5. Some invoices are paid by direct debit, meaning that the sum is automatically taken from the bank. The payment term of these direct debit payments is set to 0 days.

6. Some transactions have an unknown payment term. These payments are from before the use Exact Financials. Not filling in a payment term results in contaminated data and a lower than should be Cash Conversion Cycle. Before the use of Exact Financials, invoices were added to Softpak every two weeks, after which it took several days before they were paid. Therefore, the choice is made to set the payment term of these invoices to 30 days.

7. The dataset includes excise costs on the debtor side. As mentioned before, excise is cross posted to the customers and only appears in the debtor data. Since customers pay the excise before Nedcargo pays the tax authorities, including the excise in the Cash Conversion Cycle would reduce the reliability of the outcomes. Therefore, the excise revenue is removed from the dataset.

The sum of each payment has an impact on the impact of the Cash Conversion Cycle. An invoice of €10.– which is paid 10 days overdue, has less impact than an invoice of €1 million which is paid 10 days overdue. Therefore, not only the average is calculated for each metric, but the weighted average based on the value of the invoice as well (Gelsomino, 2017).

*Weighted Average = (Days of the metric * Value of the invoice) / Sum of the value of all invoices*

3.4.1. Logistics

The Cash Conversion Cycle for Nedcargo logistics can be found in Table 3.3. A more detailed overview can be found in Appendix XII.

Table 3.3 Cash Conversion Cycle Logistics

Adm. Number	DSO PT	Real DSO	%Overdue DSO	Operational LT	DPO PT	Real DPO	%Overdue DPO	CCC PT	Real CCC
500	19,6	61,3	75,0%	7,0	17,7	21,5	59,9%	8,9	46,7
510	26,9	29,5	70,2%	7,0	24,0	36,2	92,8%	9,8	0,2
520	29,3	35,0	64,3%	7,0	23,2	40,1	89,6%	13,1	1,9
590	60,0	31,3	0,0%	7,0	21,7	33,8	91,4%	45,3	4,5
Total	**29,1**	**34,7**	**64,6%**	**7,0**	**23,3**	**37,0**	**90,7%**	**12,8**	**4,7**
Weighted Average	**32,8**	**37,0**	**74,6%**	**7,0**	**15,2**	**23,7**	**72,2%**	**24,6**	**20,4**

The average payment term for the customers of Nedcargo logistics is 29.1 days. Despite the payment term, on average customers pay the invoices after 34.7 days. This results in 64.6% of all invoices being paid after the agreed upon payment term by customers. The weighted average payment term for customers is 32.8 days. The weighted average Days Sales Outstanding is 37.0 days. The weighted averages are slightly higher because invoices with a higher value have a longer payment term and are also paid later by customers. Out of every Euro, 74.6% or €0.75 is paid overdue to Nedcargo.

The average time between placing an order at a supplier and sending the invoice for that order to the customer (Operational Lead-time) is 7 days for logistics (Stam, 2017).

The average payment term to suppliers for logistics is 23.3 days. Despite the payment term, on average Nedcargo pays the invoices after 37 days. This results in 90.7% of all invoices being paid after the agreed upon payment term by Nedcargo. The weighted average payment term to suppliers

is 15.2 days. The weighted average Days Sales Outstanding is 23.7 days. Both weighted averages are lower because invoices with a higher value have a shorter payment term and are paid earlier by Nedcargo. Still, out of every Euro, 72.2% or €0.72 is paid overdue to the suppliers.

If both Nedcargo and its customers would uphold the agreed upon payment terms, the average Cash Conversion Cycle for Nedcargo logistics would be 12.8 days. Meaning that it takes 12.8 days for Nedcargo to turn the invested sum into revenue. With the actual payment dates, the Cash Conversion Cycle is 4.7 days. Meaning that Nedcargo currently receives the money for the sold services 4.7 days after the suppliers have been paid.

The Cash Conversion Cycle based on the weighted average payment term would be 24.6 days. Meaning that is takes 24.6 days for Nedcargo to turn the investment into revenue. The actual weighted average Cash Conversion Cycle is 20.4 days. Meaning that is takes 20.4 days for Nedcargo to turn the invested sum into revenue.

3.4.2. Forwarding

The Cash Conversion Cycle for Nedcargo forwarding can be found in Table 3.4. A more detailed overview can be found in Appendix XIII.

Table 3.4 Cash Conversion Cycle Forwarding

Adm. Number	DSO PT	Real DSO	%Overdue DSO	Operational LT	DPO PT	Real DPO	%Overdue DPO	CCC PT	Real CCC
400	28,0	41,1	69,6%	12,0	26,8	42,4	63,2%	13,2	10,7
Total	**28,0**	**41,1**	**69,6%**	**12,0**	**26,8**	**42,4**	**63,2%**	**13,2**	**10,7**
Weighted Average	**27,9**	**37,5**	**66,2%**	**12,0**	**28,3**	**29,6**	**45,3%**	**11,6**	**19,9**

The average payment term for the customers of Nedcargo forwarding is 28.0 days. Despite the payment term, on average customers pay the invoices after 41.1 days. This results in 69.6% of all invoices being paid after the agreed upon payment term by customers. The weighted average payment term for customers is 27.9 days. The weighted average Days Sales Outstanding is 37.5 days. Both weighted averages are slightly lower because invoices with a higher value have a shorter payment term and are paid earlier by customers. Nevertheless, out of every Euro, 66.2% or €0.66 is paid overdue to Nedcargo.

The estimated average time between placing an order at a supplier and sending the invoice for that order to the customer (Operational Lead-time) is 12 days for forwarding (Stam, 2017).

The average payment term to suppliers for forwarding is 26.8 days. Despite the payment term, on average Nedcargo pays the invoices after 42.4 days. This results in 63.2% of all invoices being paid after the agreed upon payment term by Nedcargo. The weighted average payment term to suppliers is 28.3 days. The weighted average Days Sales Outstanding is 29.6 days. The metric shows that invoices with a higher value have a slightly longer payment term, but are being paid much earlier by Nedcargo. Out of every Euro, 45.3% or €0.45 is paid overdue to the suppliers.

If both Nedcargo and its customers would uphold the agreed upon payment terms, the average Cash Conversion Cycle for Nedcargo forwarding would be 13.2 days. Meaning that it takes 13.2 days for Nedcargo to turn the invested sum into revenue. With the actual payment dates, the Cash Conversion Cycle is 10.7 days. This means that Nedcargo currently receives the money for the sold services 10.7 days after the suppliers have been paid.

The Cash Conversion Cycle based on the weighted average payment term would be 11.6 days. This means that Nedcargo receives the money 11.6 days after paying the suppliers. The actual weighted average Cash Conversion Cycle is 19.9 days. This means that Nedcargo receives the money 19.9 days after the suppliers have been paid.

3.4.3. Multimodal

The Cash Conversion Cycle for Nedcargo multimodal can be found in Table 3.5. A more detailed overview can be found in Appendix XIV.

Table 3.5 Cash Conversion Cycle Multimodal

Adm. Number	DSO PT	Real DSO	%Overdue DSO	Operational LT	DPO PT	Real DPO	%Overdue DPO	CCC PT	Real CCC
402	29,0	34,1	52,9%	7,0	28,7	35,5	42,5%	7,3	5,6
403	28,2	52,0	45,7%	7,0	23,1	52,7	53,7%	12,1	6,4
404	29,2	49,2	84,7%	7,0	18,7	39,0	72,6%	17,5	17,2
Total	**29,1**	**40,0**	**63,7%**	**7,0**	**22,0**	**41,8**	**61,3%**	**14,1**	**5,1**
Weighted Average	**29,6**	**34,3**	**69,7%**	**7,0**	**20,2**	**31,8**	**51,1%**	**16,3**	**9,4**

The average payment term for customers from multimodal is 29.1 days. Despite the payment term, on average customers pay the invoices after 40 days. This results in 63.7% of all invoices being paid after the agreed upon payment term by customers. The weighted average payment term for customers is 29.6 days. The weighted average Days Sales Outstanding is 34.3 days. This difference is caused by invoices with a higher value being paid earlier by customers than the invoices with a lower value. However, out of every Euro, 69.7% or €0.70 is paid overdue to Nedcargo.

The estimated average time between placing an order at a supplier and sending the invoice for that order to the customer (Operational Lead-time) is 7 days for multimodal (Stam, 2017).

The average payment term to suppliers for multimodal is 22 days. Despite the payment term, on average Nedcargo pays the invoices after 41.8 days. This results in 61.3% of all invoices being paid after the agreed upon payment term by Nedcargo. The weighted average payment term to suppliers is 20.2 days. The weighted average Days Sales Outstanding is 31.8 days. The difference shows that Nedcargo pays the invoices with a higher value earlier than the invoices with a lower value. Nevertheless, out of every Euro, 51.1% or €0.51 is paid overdue to the suppliers.

If both Nedcargo and its customers would uphold the agreed upon payment terms, the average Cash Conversion Cycle for Nedcargo multimodal would be 14.1 days. This means that it takes 14.1 days for Nedcargo to turn the invested sum into revenue. With the actual payment dates, the Cash Conversion Cycle is 5.1 days. This means that Nedcargo currently receives the money for the sold services 5.1 days after the suppliers have been paid.

The Cash Conversion Cycle based on the weighted average payment term would be 16.3 days. Meaning that is takes 16.3 days for Nedcargo to turn the investment into revenue. The actual weighted average Cash Conversion Cycle is 9.4 days. Meaning that is takes 9.4 days for Nedcargo to turn the invested sum into revenue.

3.4.4. Conclusion

The Cash Conversion Cycle based on the weighted average gives the best indication of the reality. An overview of the weighted average metrics per business unit can be found in Figure 3.4.

A notable difference is that Nedcargo logistics and Nedcargo forwarding pay the suppliers 8 to 14 days before being paid by the customers. This results in a longer Cash Conversion Cycle of approximately 20 days.

For Nedcargo multimodal, the suppliers are only paid 3 days before the customer pays Nedcargo. This results in a shorter Cash Conversion Cycle of 9 days compared to that of Nedcargo logistics and Nedcargo forwarding.

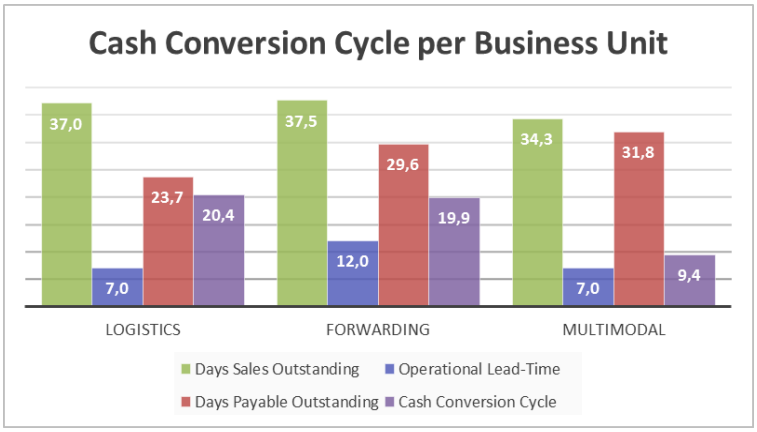

Figure 3.4 Cash Conversion Cycle per Business Unit

3.4.5. Financing Costs & Net Operation Working Capital

During the Cash Conversion Cycle, financing costs occur. Money that has not yet been received cannot be in the bank, thus cannot generate interest. The Days Sales Outstanding creates financing costs for Nedcargo while the Days Payable Outstanding creates financing costs for the suppliers. For

Nedcargo, an interest rate of 1.5% is used. The financing costs for Nedcargo can be found in Table 3.6 (Gelsomino, 2017) (Lieshout, 2017) (Doodeman, 2012) (Klees, 2014).

*Sales Financing Costs Nedcargo = Total sales value * Interest rate * (Days of the metric / 365)*

Table 3.6 Sales Financing Costs Nedcargo

Sales Financing Costs	DSO PT	DSO	WADSO PT	WADSO
Logistics	€ 79.684	€ 94.918	€ 89.675	€ 101.256
Forwarding	€ 23.414	€ 34.361	€ 23.283	€ 31.352
Multimodal	€ 24.188	€ 33.259	€ 24.627	€ 28.535
Total	**€ 127.286**	**€ 162.538**	**€ 137.584**	**€ 161.143**

The Days Sales Outstanding costs are made by Nedcargo because Nedcargo has to finance the total sales value for the duration of the Days Sales Outstanding. On an annual basis, the financing costs for Nedcargo are €161,143.–. The table shows that Nedcargo is making €23,559.– (= €161,143 - €137,584) additional costs because customers do not uphold the agreed upon payment terms.

The Days Sales Outstanding metrics result in the amount of Net Working Capital that is in the accounts receivable, see Table 3.7. On average, the accounts receivable are €10.7 million. An additional of €1.6 million (= €10,742,895 - €9,172,295), which is 17.1%, working capital is trapped in the accounts receivable of Nedcargo because customers pay after the agreed upon payment terms.

Table 3.7 Sales Net Operating Working Capital Nedcargo

Sales Working Capital	DSO PT	DSO	WADSO PT	WADSO
Logistics	€ 5.312.258	€ 6.327.894	€ 5.978.305	€ 6.750.403
Forwarding	€ 1.560.907	€ 2.290.757	€ 1.552.167	€ 2.090.139
Multimodal	€ 1.612.561	€ 2.217.244	€ 1.641.823	€ 1.902.352
Total	**€ 8.485.726**	**€ 10.835.895**	**€ 9.172.295**	**€ 10.742.895**

Since the interest rate is different for every supplier, an estimate is used in order to calculate the financing costs for supplier. On average, Small and Medium Enterprises have a 1.7% higher interest rate than larger companies. Therefore, an interest rate of 3.2% is used for the suppliers of Nedcargo. The financing costs for the suppliers of Nedcargo can be found in Table 3.8 (Doodeman, 2012) (Klees, 2014) (Lieshout, 2017).

*Purchase Financing Costs Suppliers = Total purchase value * Interest rate * (Days of the metric / 365)*

Table 3.8 Purchase Financing Costs Suppliers

Purchase Financing Costs	DPO PT	DPO	WADPO PT	WADPO
Logistics	€ 108.179	€ 171.488	€ 70.220	€ 109.756
Forwarding	€ 30.032	€ 47.573	€ 31.729	€ 33.195
Multimodal	€ 30.015	€ 57.217	€ 27.668	€ 43.540
Total	**€ 168.226**	**€ 276.279**	**€ 129.617**	**€ 186.491**

The Days Payable Outstanding costs are made by suppliers because the suppliers of Nedcargo have to finance the total purchase value for the duration of the Days Payable Outstanding. The table shows that suppliers are making €56,874.– (= €186,491 - €129,617) additional financing costs because Nedcargo does not uphold the agreed upon payment terms.

The Days Payable Outstanding metrics result in the amount of Net Working Capital that is in the accounts receivable, see Table 3.9. On average, the accounts receivable are €5.8 million. An additional of €1.8 million (= €5,827,843 - €4,050,530), which is 43.9%, working capital is trapped in

the accounts receivable of the suppliers because Nedcargo pays after the agreed upon payment terms.

Table 3.9 Purchase Net Operating Working Capital Suppliers

Purchase Working Capital	DPO PT	DPO	WADPO PT	WADPO
Logistics	€ 3.380.602	€ 5.359.003	€ 2.194.381	€ 3.429.886
Forwarding	€ 938.500	€ 1.486.660	€ 991.533	€ 1.037.340
Multimodal	€ 937.961	€ 1.788.042	€ 864.617	€ 1.360.617
Total	**€ 5.257.063**	**€ 8.633.705**	**€ 4.050.530**	**€ 5.827.843**

3.5. ABC-Analysis

In order to determine which customers and suppliers contribute most to the business of Nedcargo, an ABC-analysis is made. For customers the ABC-analysis is based on revenue, for suppliers the ABC-analysis is based on costs. In general, 80% of the total costs/revenue is generated by 20% of the customers/suppliers (A), the next 15% of the costs/revenue is generated by 30% of the customers/suppliers (B) and the last 5% of the costs/revenue is generated by 50% of the customers/suppliers (C). The data required for the ABC-analysis is extracted from the Cash Conversion Cycle datasets, since these include the sum of each transaction (Groenendijk, Excel 2013, 2014) (Groenendijk, Databases & Access 2013, 2014) (Softpak B.V., 2017) (Quaadgras, 2006) (Exact Holding B.V., 2017) (Stam, 2017).

3.5.1. Customers

The ABC-analysis for the customers of Nedcargo can be found in Table 3.10. The revenue and costs of Nedcargo Excise Services B.V. (Administration number 540) are removed.

Table 3.10 ABC-Analysis Customers

ABC	Invoices	%Invoices	Revenue	%Revenue	Number	%Number	%New
A	11122	33,9%	€ 85.263.242	79,6%	43	6,0%	18,4%
B	11809	36,0%	€ 16.493.266	15,4%	80	11,1%	34,2%
C	5817	17,7%	€ 4.278.353	4,0%	111	15,4%	47,4%
D	4092	12,5%	€ 1.084.469	1,0%	485	67,5%	
Total	**32840**	**100%**	**€ 107.119.330**	**100%**	**719**	**100%**	**100%**

Nedcargo has 719 customers who have generated €107 million in revenue in 2016 (excluding Belgium and the outstanding debtors). Out of these 719 customers, 485 (67.5%) are accountable for only 1% of the total revenue. Because of the large number of small, once off customers, an additional category (D) is added. Out of the 719 customers, only 43 (6%) are accountable for 79.6% of the total revenue. Without the D category, the percentages of A, B and C customers are close to the general rule. However, by looking at the detailed overview, only a handful of the A customers contribute most to the revenue, see Appendix XV. Therefore, it can still be concluded that these customers have a lot of bargaining power over Nedcargo.

3.5.2. Suppliers

The ABC-analysis for the suppliers of Nedcargo can be found in Table 3.11.

Table 3.11 ABC-Analysis Suppliers

ABC	Invoices	%Invoices	Costs	%Costs	Number	%Number	%New
A	16200	49,5%	€ -64.928.432	79,9%	110	8,6%	20,7%
B	8534	26,1%	€ -12.230.883	15,1%	171	13,3%	32,2%
C	4894	15,0%	€ -3.274.360	4,0%	250	19,5%	47,1%
D	3107	9,5%	€ -815.067	1,0%	753	58,6%	
Total	**32735**	**100%**	**€ -81.248.742**	**100%**	**1284**	**100%**	**100%**

Nedcargo has 1284 suppliers who are accountable for €81 million in costs in 2016 (excluding Belgium and the outstanding creditors). Out of the 1284 suppliers, 753 (58.6%) are accountable for only 1% of the total costs. Because of the large number of small, once off suppliers, an additional category (D) is added. Out of the 1284 suppliers, only 110 (8.6%) are accountable for 79.9% of the total costs. Without the D category, the percentages of A, B suppliers are close to the general rule. However, by looking at the detailed overview, only a handful of the A suppliers contribute most to the revenue. This is lower than the general rule of 20% and indicates that the suppliers of Nedcargo have bargaining power over Nedcargo. A more detailed overview of all the A and B suppliers of Nedcargo can be found in Appendix XVI.

3.6. Conclusion

Integrated Logistics Concept

In 2015, Nedcargo re-evaluated its strategy and set new goals for 2015-2020:

- Core Purpose: Safely and efficiently deliver foods, drinks and retail products.
- Ambition: Deliver 100,000 unique products | to 500,000,000 consumers | without waste.
- Strategy: Customers evaluate the services with a 9+ | Safety and quality in all the activities | Add value for the customer by offering technical and efficient logistic solutions.
- Value proposition: Wasteless Supply Chain!

The strategy shows that Nedcargo wants to focus on improving customer satisfaction. This would also mean a preference to adopt Supply Chain Finance instruments from customers rather than offering Supply Chain finance solutions to suppliers.

The network of Nedcargo is a network with both convergence and divergence streams. Goods are stored in the warehouse of Nedcargo for the local or central stock of customers. Therefore, the Customer Order Decoupling Point for the supply chain 1/2. Several suppliers are used by Nedcargo for one customer order while one supplier can be used for several customer orders. The Customer Order Decoupling Point for Nedcargo is 3, assemble to order.

Nedcargo uses Softpak to upload purchasing invoices to Exact Financials which keeps track of the entire financial status of Nedcargo. All costs invoices are uploaded to Exact via Scansys. The program used to make the annual report is Unit4 Audition.

Each business unit (logistics, forwarding and multimodal) consists of its own departments. These departments are supported by Nedcargo Shared Services.

Financial Ratios

The financial ratios show that Nedcargo is a growing business. A profit is being made on both the debt and equity. Especially the investment of equity brings a high return for the investors. The profit of Nedcargo is increasing by efficient use of assets. The costs of debt are below average which indicates a higher creditworthiness than average for Nedcargo. Overall, Nedcargo is a healthy, fast growing organisation that is worth investing in.

Cash Conversion Cycle & Working Capital

A notable difference is that customers pay invoices with a higher value later than invoices with a lower value, these invoices also have a slightly longer payment term. Higher value invoices are also paid overdue more frequently, about 5 to 10 days after the agreed upon payment terms.

Nedcargo on the other hand pays invoices with a higher value earlier than invoices with a lower value, these invoices also have shorter payment terms. Higher value invoices are less frequently paid overdue by Nedcargo. However, Nedcargo still pays invoices between 1 and 11 days after the agreed upon payment term.

The Cash Conversion Cycle lies between 9 and 20 days. This is quite low and means that Nedcargo receives the money shortly after the suppliers have been paid. However, this does not mean that all parties are making unnecessary costs and trapped Net Working Capital. Despite the negative Net Working Capital, the Net Operating Working Capital is around €6.8 million. With the short Cash Conversion Cycle, Nedcargo is able to collects its assets relatively fast.

The biggest problem in regards to the payments is that a lot of payments are paid overdue. Between 66% and 74% of every Euro is paid overdue by the customers of Nedcargo. Between 45% and 72% of every Euro is paid overdue to suppliers by Nedcargo.

Nedcargo and its suppliers are making additional financing costs because all parties do not uphold the agreed upon payment terms. The customers and Nedcargo pay after the agreed upon payment terms which causes for additional financing costs. The real finance costs for both the average and weighted average are higher than the payment term finance costs. The financing costs for Nedcargo are €161,143.– on an annual basis, which is €23,559.– or 17.1% higher than it should be. For suppliers, the financing costs are €186,491.– per year, which is €56,874.– or 43.9% higher than it should be.

Nedcargo and its suppliers also have less Net Working Capital available because of the overdue payments. The weighted average accounts receivable of Nedcargo is €10.7 million, which is €1.6 million or 17.1% higher than it should be. The weighted average accounts receivable of the suppliers is €5.8 million, which is €1.8 million or 43.9% higher than it should be.

ABC-Analysis

The ABC-analysis results are far from the general rule. Nedcargo only has a few A and B customers which makes Nedcargo very dependent on them. The customers have bargaining power over Nedcargo which allows them to not uphold the agreed upon payment terms. This results in Nedcargo making additional financing costs. The number of small customers shows that Nedcargo accepts a lot of once-off orders. However, this should not be a problem as long as a profit is being made on these orders.

On the supplier side, Nedcargo only has a few A and B suppliers which makes Nedcargo very dependent on them. The suppliers have bargaining power over Nedcargo. However, Nedcargo does not uphold the agreed upon payment terms which results in the suppliers making additional financing costs.

4. Possible Solutions

In this chapter, the five possible solutions for Nedcargo, which have been recommended in previous research, will be discussed. A distinction is made between strategic, tactical and operational Supply Chain Finance solutions as seen in Figure 4.1 (Ronald de Boer, 2015).

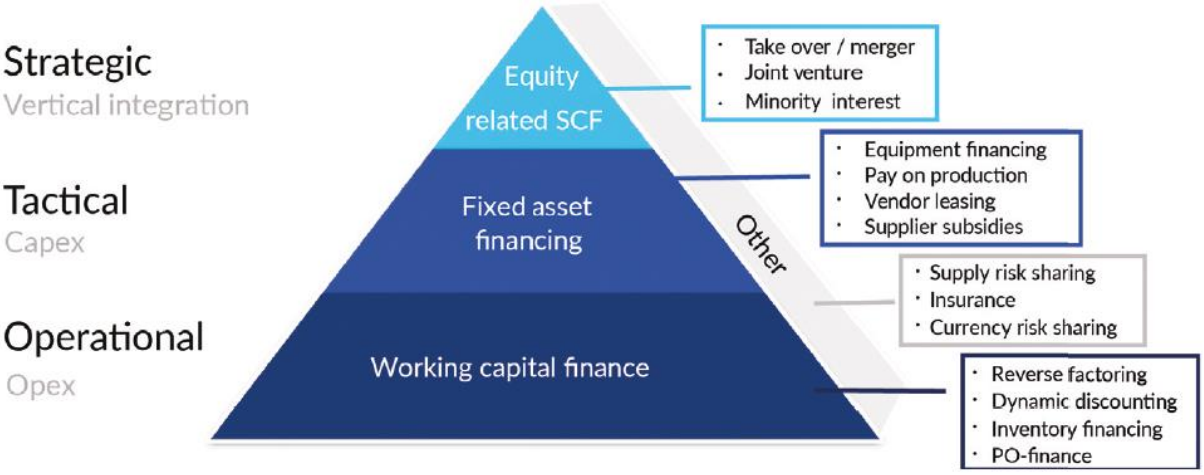

Figure 4.1 Supply Chain Finance Pyramid

The five solutions can either be offered to suppliers or customers, or can be adopted from suppliers or customers, see Table 4.1. These models were selected since the aim of this research is to improve/shorten the Cash Conversion Cycle and increase the Net Working Capital availability, thus focusing on operational Supply Chain Finance solutions. Only Fixed Assets Financing is a tactical solution which shows how the Net Working Capital that is freed up can be used to invest and improve supply chain relations (Ronald de Boer, 2015).

Table 4.1 Possible Solutions

	Suppliers	**Customers**
Offer	Dynamic Discounting	Dynamic Discounting
	Reverse Factoring	Inventory Financing
	Fixed Assets Financing	
	Structured Commodity Financing	
Adopt	Dynamic Discounting	Dynamic Discounting
		Reverse Factoring
		Fixed Assets Financing
		Structured Commodity Financing

For all cash benefit calculations, estimated interest rates are used. The interest rate for Nedcargo is set to 1.5% based on the financial ratio analysis. Sources show that Small and Medium Enterprises have an interest rate which is generally 1.7% higher. Therefore, an interest rate of 3.2% is used for the suppliers. The interest rate for customers is set to 0.7% since the most of the customers of Nedcargo are large multinationals (Lieshout, 2017) (Klees, 2014) (Doodeman, 2012).

Beside the interest rates, the cash benefit of Dynamic Discounting and Reverse Factoring depends on a lot of other factors. Discussing all possible calculations would mean separate discussions on the level of the:

- Business unit: logistics, forwarding, multimodal or Nedcargo total
- Direction: sales or purchases
- Metric: average payment term, average actual payment, weighted average payment term or weighted average actual payment.

Especially since these are different in every scenario, the impact of these models will be visualised with examples by using the weighted average Days Sales Outstanding for Nedcargo in total. Changing the scenario would have an impact on the specific outcomes such as cash benefit. However, the main conclusions will remain the same, regardless of the scenario. Furthermore, the

Excel model offers the possibility to change each of the above mentioned scenario parameters by pressing a button. This way, Nedcargo will be able to check any given situation (Doodeman, 2012) (Klees, 2014) (Lieshout, 2017) (Nederlof, 2017) (Gelsomino, 2017).

4.1. Dynamic Discounting

Dynamic Discounting is an operational, post-shipment way to finance Net Working Capital. With Dynamic Discounting, a discount is given when an invoice is paid earlier than the agreed upon payment term. The discount rate is based on the number of days the invoice is paid prior to the due date of the invoice. The process of Dynamic Discounting can be found in Figure 4.2 (Ronald de Boer, 2015).

1. The buyer places a purchase order at the supplier.
2. The supplier sends the goods/services and invoice to the buyer.
3. The buyer approves the invoice sent by the supplier on a shared platform.
4. Now, two scenarios can occur:
    - Supplier-initiated, the supplier request earlier payment and offers the buyer a discount rate on the invoiced amount, the buyer then either accepts or declines the suppliers offer.
    - Buyer-initiated, the buyer offers earlier payment and requests a discount rate on the invoiced amount, the supplier either accepts or declines the buyers offer.
5. The supplier receives the discounted payment from the buyer.

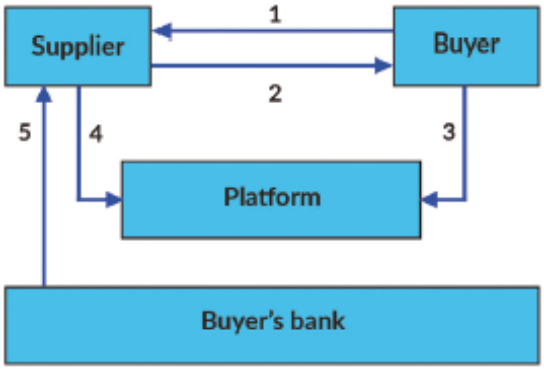

Figure 4.2 Dynamic Discounting Process

Instead of requesting or offering earlier payment, the buyer and supplier can also request/offer an extended payment term at the costs of a fee on the invoiced amount. This process has no term (yet), therefore, the term Dynamic Payment Extension will be used (Gelsomino, 2017).

4.1.1. Parties

There are four possibilities for the implementation of Dynamic Discounting in the supply chain of Nedcargo:

1. Nedcargo could offer its customers a discount on the invoiced amount if the customers pay earlier. Nedcargo could also offer an extended payment term instead of a discount against an interest rate on the invoiced amount.
2. Customers could offer Nedcargo earlier payment against a discount on the invoiced amount. Customers could also offer to pay in interest rate if Nedcargo extends the payment terms.
3. Nedcargo could offer to pay its suppliers earlier against a discount on the invoiced amount. Nedcargo could also offer to pay an interest rate if the suppliers extend the payment terms.
4. Suppliers could offer Nedcargo a discount on the invoiced amount if Nedcargo pays earlier. Suppliers could also offer an extended payment term instead of a discount against an interest rate on the invoiced amount.

4.1.2. Advantages & Disadvantages

Buyer

Dynamic Discounting offers the buyer a discount on the invoiced amount for paying earlier which can increase profit margins. However, the buyer will have to finance the early payment with Net Working Capital. A Dynamic Payment Extension would increase Net Working Capital availability against the costs of a fee on the invoiced amount.

Supplier

For the supplier, Dynamic Discounting reduces the Days Sales Outstanding which improves the availability of Net Working Capital. However, the receiving the payment early costs the supplier a discount on the invoiced amount. A Dynamic Payment Extension would require Net Working Capital to finance the extended payment term against receiving a fee on the invoiced amount (Ronald de Boer, 2015).

4.1.3. Cash Benefit

Financing costs

In order to calculate the impact of Dynamic Discounting, the costs of financing the Days Sales Outstanding for both Nedcargo and its customers are calculated, see Appendix XVII. The financing costs depend on the payment term and the interest rates. The longer the payment term to Nedcargo (supplier), the higher the financing costs, the lower the benefit. However, the longer the payment term for the customer, the lower the financing costs, the higher the benefit (Gelsomino, 2017) (C. de Goeij, 2017) (R. de Boer, 2017) (Groenendijk, Excel 2013, 2014).

*Sales Financing Costs Nedcargo = Total sales value * Interest rate * (Days of the metric / 365)*

Cash benefit

Dynamic Discounting or a Dynamic Payment Extension is compensated by a discount or fee on the invoiced amount. A discount will be given if the payment term is lowered, a fee will be charged if the payment term is increased. The requested discount/fee on an annual basis, as well as the new payment term, may vary which changes the results of the model. The Excel model shows all discounts/fees on an annual basis from a 0.5% to 20% interest and a payment term from 0 to 90 days. Since the table is too big for the report, a part of the table can be found in Appendix XVIII.

*Discount/fee = (Annual discount / 365) * Sales Value * (Current Payment Term – New Payment Term)*

The discount or fee is now compared to the financing costs of Nedcargo and the customers. A part of the cash benefit table of Nedcargo can be found in Appendix XIX. For Nedcargo, the break-even point for Dynamic Discounting is the current weighted average Days Sales Outstanding and the interest percentage of 1.5%. Lowering the payment term would only be beneficial for Nedcargo if the requested discount on an annual basis is lower than 1.5%. Extending the payment term would only be beneficial if the fee on annual basis is higher than 1.5%.

A part of the customer benefit table can be found in Appendix XX. For the customer, the break-even point for Dynamic Discounting is the current weighted average Days Sales Outstanding and the interest percentage of 0.7%. Lowering the payment term would only be beneficial for the customer if the discount on annual basis is higher than 0.7%. Extending the payment term would only be beneficial if the fee on annual basis is lower than 0.7%.

By combining the cash benefit of Nedcargo and the customers, the total benefit is calculated, see Appendix XXI. As long as the interest percentage of the customer is lower than that of Nedcargo, shortening the payment term will result in a total cash benefit. However, because of the above mentioned criteria, the criteria of both parties can be matched, see Table 4.2. Shortening the payment term would only result in a cash benefit for both parties if the discount lies between 0.7% and 1.5%.

Table 4.2 Matching Criteria Customer with Lower Interest

	Customer Criteria	Supplier Criteria
Extend Payment Term	<0,7% Fee	>1,5% Fee
Shorten Payment Term	>0,7% Discount	<1,5% Discount

If the interest rate of the customer is higher than Nedcargo, extending the payment term will result in a total cash benefit. As a simple example, a 2% interest rate for the customer will be used. Again, criteria of both parties can be matched, see Table 4.3. Extending the payment term would only result in a cash benefit for both parties if the fee lies between 1.5% and 2% (Gelsomino, 2017) (C. de Goeij, 2017) (R. de Boer, 2017).

Table 4.3 Matching Criteria Customer with Higher Interest

	Customer Criteria	Supplier Criteria
Extend Payment Term	<2% Fee	>1,5% Fee
Shorten Payment Term	>2% Discount	<1,5% Discount

Net Working Capital

The effect of Dynamic Discounting on the Net Working Capital related to the payment term is now calculated, see Appendix XXII. Shortening the payment term would reduce the accounts receivable of Nedcargo which frees up Net Working Capital. For the customer however, the accounts payable

would decrease which requires a Net Working Capital investment. Therefore, customers must decide if the cash benefit outweighs the Net Working Capital investment.

Extending the payment term would increase the accounts receivable of Nedcargo which would require Net Working Capital investment. For the customer however, the accounts payable would decrease which frees up Net Working Capital. Therefore, Nedcargo must decide if the cash benefit outweighs the Net Working Capital investment (Gelsomino, 2017) (C. de Goeij, 2017) (R. de Boer, 2017) (Groenendijk, Excel 2013, 2014).

4.2. Reverse Factoring

Reverse Factoring is an operational, post-shipment way to finance Net Working Capital which originates from Factoring. With (Reverse) Factoring, a financial institution/factor pays the supplier a discounted amount in advance. The discount is based on the number of days the invoice is paid prior to the due date of the invoice. The differences between Factoring and Reverse Factoring can be found in Table 4.4 (Graydon, 2017).

Table 4.4 Factoring vs Reverse Factoring

Factoring	Reverse Factoring
Factor looks at the financial status of the supplier	Factor looks at the financial status of the buyer
Supplier receives 85% of the discounted invoice amount, other 15% after the buyer has paid	Only approved invoices, supplier receives 100% of the discounted invoice amount
Risk of default payment for the supplier or buyer depending on the contract	Risk of default payment for the factor
Factor is able to reverse the financing in case of default payment	Factor is unable to reverse the financing in case of default payment
Agressive factor and thus negatively affecting supply chain relationships	A good relationship is important for the factor
Not for smaller businesses	More suitable for smaller businesses

As the table clearly shows, Reverse Factoring is way more attractive for suppliers than Factoring. The process of Reverse Factoring can be found in Figure 4.3 (Ronald de Boer, 2015).

1. The buyer places a purchase order at the supplier.
2. The supplier sends the goods/services and invoice to the buyer.
3. The buyer approves the invoice sent by the supplier and states that he will pay on the due date of the invoice on a shared technological platform.
4. The supplier can request early payment of the invoice at the costs of a discount on the invoiced amount.
5. The financial institution pays the discounted invoice amount to the supplier.
6. The buyer pays the full invoiced amount to the financial institution.

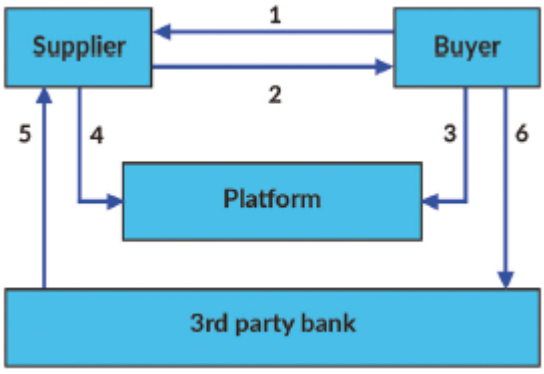

Figure 4.3 Reverse Factoring Process

4.2.1. Parties

There are two possibilities for the implementation of Reverse Factoring in the supply chain of Nedcargo:

1. The customers of Nedcargo could offer Reverse Factoring to Nedcargo. Now, customers will approve invoices and agree to pay the invoice on the due date. Nedcargo can request early payment from the bank against a discount. On the due date, the customer will pay the bank for the full invoiced amount.
2. Nedcargo could offer Reverse Factoring to its suppliers. In this scenario, Nedcargo approves the invoice and agrees to pay the invoice on the due date. The supplier can then request early payment which the bank will fund against a discount. On the due date, Nedcargo will pay the bank for the full invoiced amount.

4.2.2. Advantages & Disadvantages

Buyer

The buyer could request an extended payment term which improves Net Working Capital availability. However, the buyer may choose to not request an extended payment term or discount which can lead to an improved buyer-supplier relationship and can result in higher service levels.

However, a change in the current way of working is often perceived as a burden, fast approval of invoices by the buyer is required, the shared technological platform required for Reverse Factoring brings implementation costs and the buyer has to get suppliers to use Reverse Factoring one by one which can take a lot of time. Furthermore, finding a bank that is willing to reverse factor not just the A and B, but also the C suppliers may pose as a challenge due to the smaller sum of the purchases. Lastly, the benefit that can be gained depends on the interest rates. Therefore, there is the risk of losing the benefit due to changing interest rates.

Supplier

The financial institution looks at the creditworthiness of the buyer instead of the supplier, thus making the risk for the financial institution lower. The supplier is therefore able to request and receive early payment from the financial institution at lower financing costs as long as the interest rate of the buyer is lower. Another benefit is that risk of default payment is transferred to the financial institution. The risk of default payment however is lower because the invoice has already been approved by the buyer. This allows the supplier to receive the invoiced amount earlier when requested, thus improving Net Working Capital availability. Lastly, the supplier has more visibility in the cash flow due to the use of a shared technological platform.

The disadvantages of Reverse Factoring are that the supplier has to offer an extended payment term to the buyer. The early payment costs to the bank are paid on the new payment term which includes the extension. The supplier may also have extra unforeseen costs such as legal costs, regulatory costs and changed operational processes costs. Furthermore, a lack of knowledge about changing market interest rates is risky for the supplier. Changing interest rates may result in the offer no longer being attractive. Lastly, the supplier becomes dependent on the arrangement while the arrangement is often verbal and not in the contract. Therefore, the buyer can stop reverse factoring at any point in time.

Financial institution

The financial institution has a lower risk of default payment because the buyer agrees on paying the invoice on the due date. The financial institution is able to make a profit by paying a discounted amount to the supplier and receiving the full invoiced amount from the buyer. Lastly, the financial institution has improved connections and relationships with smaller businesses and has insight in invoices. Therefore, the financial institution gains free information on Net Working Capital needs and can offer loans to those who need it.

One of the disadvantages however, is that the financial intuition replaces the original business of banks, thus threatening bankruptcy. The financial institution also has to invest in a shared platform where the invoices can be approved. Lastly, fraud and legal issues may occur in the risk of default payment (Ronald de Boer, 2015).

4.2.3. Cash Benefit

Cash benefit

In order to calculate the impact of Reverse Factoring, the costs of financing the Days Sales Outstanding for both Nedcargo (supplier) and its customers is calculated, see Appendix XXIII. The financing costs for Nedcargo depend on the current payment term, the payment term extension and the Reverse Factoring programme rate. The programme rate used is for the calculations is 0.7% (Nederlof, 2017).

*Reverse Factoring Financing Costs Nedcargo = Total sales value * Programme rate * ((Days of the metric + Payment term extension – Day at which payment is requested) / 365)*

The earlier Nedcargo requests payment, the higher the costs will be. By comparing the costs that Nedcargo would normally have made, based on the interest rate of 1.5%, to the new costs, the benefit for Nedcargo is calculated. However, Reverse Factoring is not always beneficial for the supplier, in this case Nedcargo. The break-even point for Reverse Factoring depends on the programme rate and interest rates. The lower the programme rate the bank charges for early payment, the higher the acceptable payment extension, see Figure 4.4. As long as the payment term extension is below the line, the cash benefit for Nedcargo with 1.5% interest is positive. A more detailed overview of the break-even points can be found in Appendix XXIV.

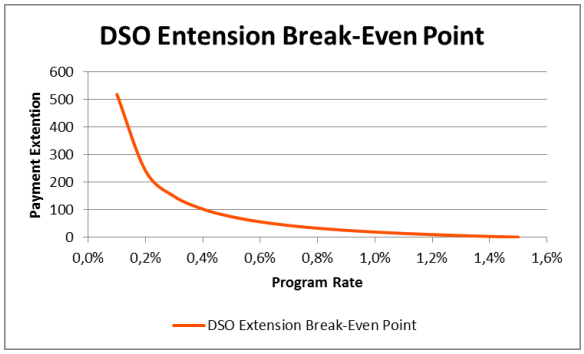

Figure 4.4 DSO Extension Break-Even Point

The customer benefit is created by the payment term extension towards the bank, in this scenario a 20 days extension is used. Since the customer is able to pay 20 days later, a benefit is gained at the interest rate of the customer. The longer the payment term extension for the customer, the higher the interest benefit, see Appendix XXV. The table also includes the Net Working Capital Benefit for the customer which will be explained now (C. de Goeij, 2017) (Gelsomino, 2017) (R. de Boer, 2017) (Groenendijk, Excel 2013, 2014).

*Customer interest benefit = Total sales value * Interest rate * (Days of the metric / 365)*

Net Working Capital

The effect of Reverse Factoring on the Net Working Capital is now calculated, see Appendix XXVI. For Nedcargo, the accounts receivable and Net Working Capital are the same as for Dynamic Discounting. The difference however, is that the accounts payable of the customers increase due to receiving a payment term extension towards the bank. The extension thus leads to an increase in the Net Working Capital availability. The longer the payment extension, the higher the Net Working Capital that is available for the customer as previously seen in Appendix XXV (C. de Goeij, 2017) (Gelsomino, 2017) (R. de Boer, 2017).

4.3. Inventory Financing

Inventory Financing is an operational, in-transit way to finance Net Working Capital. With Inventory Financing, a Logistics Service Provider is involved in the inventory process. The process of Inventory Financing can be found in Figure 4.5 (Ronald de Boer, 2015).

1. The buyer places a purchase order at the supplier.
2. The supplier informs the Logistics Service Provider of the purchase order and requests transport. This could, but does not have to be, done via the use of a shared technological platform.
3. The Logistics Service Provider buys the goods or part of it from the supplier and gains ownership of the goods.
4. The Logistics Service Provider transports the goods to the buyer.
5. The buyer receives the goods and informs the supplier.
6. The buyer pays the Logistics Service Provider at the due date of the invoice.
7. In case the Logistics Service Provider only financed part of the purchase order, the remaining amount is paid to the supplier.

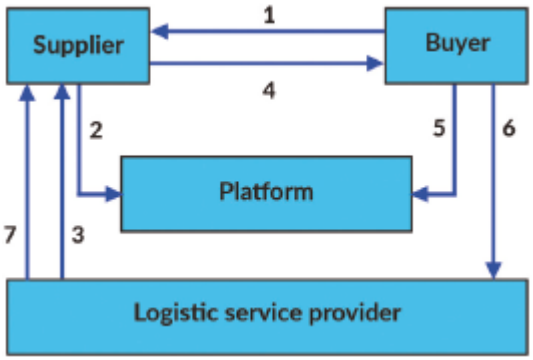

Figure 4.5 Inventory Financing Process

There are however three different types of inventory financing which are: inventory pledge credit, warehouse financing and unified credit (Ronald de Boer, 2015).

Inventory pledge credit
With inventory pledge credit, the suppliers inventory is used as collateral to a financial institution. In this scenario, the Logistics Service Provider only serves as a supervisor of the inventory. The supplier receives a loan for the collateral inventory from the financial institution. The pledge credit can either be static or dynamic. In the static mode, all inventory gets converted into a loan. With the dynamic mode, the supplier is able to have inventory above a set threshold. Any inventory above the threshold will not be converted into a loan.

Warehouse financing
Warehouse financing is almost the same as inventory pledge credit. The difference is that with warehouse financing, the suppliers inventory is used as collateral to the Logistics Service Provider instead of the financial institution. The financial institution only provides a loan to the supplier.

Unified credit
The last type of inventory financing is unified credit. With unified credit, the financial institution provides funds for the Logistics Service Provider. With the funds, the Logistics Service Provider buys the goods from the supplier and gains ownership of the goods. The Logistics Service Provider is responsible for collecting the payment from the buyer (Ronald de Boer, 2015).

4.3.1. Parties
1. Nedcargo could offer its customers inventory financing where Nedcargo will act as a supervisor of the inventory, a custodian of the inventory or control the entire process.

4.3.2. Advantages & Disadvantages
Buyer
The buyer has improved Net Working Capital availability if the Days Payable Outstanding to the Logistics Service Provider is increased. The inventory holding costs may also be lower if the Logistics Service Provider has a higher creditworthiness then the buyer. However, the buyer does pay an interest rate on the actual invoiced amount.

Supplier
The supplier lowers the Days Sales Outstanding which improves the Net Working Capital availability due to receiving the money earlier. The inventory holding costs may also be lower if the Logistics Service Provider has a higher creditworthiness. However, the supplier receives a discounted amount instead of the full invoiced amount.

Logistics Service Provider
The Logistics Service Provider receives an interest rate on the invoiced amount and offers an additional service which attracts new customers. However, there are risks sucks as price fluctuations, low margins, false supplier/buyer information and the risk of default payment. Lastly, there is the risk of wrong decisions or errors in managing operations because the Logistics Service Provider may be unfamiliar with the handling of the products.

Financial institution
The financial institution receives an interest rate on the loan/fund amount and makes a profit. However, inventory is risky as sales could go down, products could be stolen or get damaged which will result in problems with the financial institution its accounts receivable (Ronald de Boer, 2015).

4.3.3. Cash Benefit
The cash benefit calculations for Inventory Financing are very complex and would require a lot of time, information and inventory data. Furthermore, different types of inventory financing would each require its own calculations. Since the products in stock are owned by the customers, acquiring the necessary data is a challenge if not impossible. For these reasons, no cash benefit calculations are made for Inventory Financing. However, this does not mean that Inventory Financing is not a possible solution for Nedcargo (Gelsomino, 2017).

4.4. Structured Commodity Financing
Structured Commodity Financing is an operational pre-shipment way to finance Net Working Capital. With Structured Commodity Financing, a Special Purpose Vehicle organises the transaction between buyer and supplier by funding of a bank. The process of Structured Commodity Financing can be found in Figure 4.6 (Ronald de Boer, 2015).

The Special Purpose Vehicle arranges a bank which will provide funds in order for the Special Purpose Vehicle to pay suppliers.

1. The Special Purpose Vehicle purchases goods and pays the suppliers.
2. The buyer places a purchase order at the supplier.
3. The supplier delivers the goods to the buyer.
4. The buyer pays the Special Purpose Vehicle for the goods.
5. The Special Purpose Vehicle pays the bank for the provided funds.

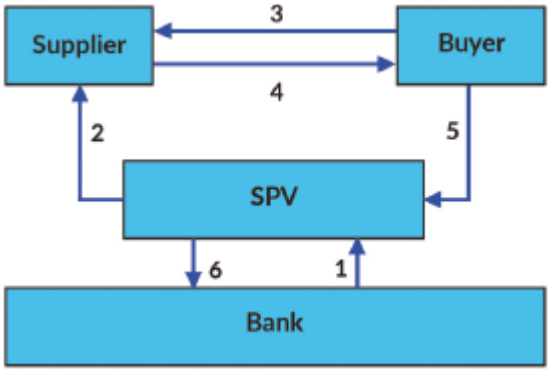

Figure 4.6 Structured Commodity Financing Process

4.4.1. Parties

There are two possibilities for the implementation of Fixed Assets Financing in the supply chain of Nedcargo:

1. Customers could offer Structured Commodity Financing to Nedcargo. This will help Nedcargo to improve Working Capital availability.
2. Nedcargo could offer Structured Commodity Financing to its suppliers. This will help the weaker suppliers, who have a lower creditworthiness than Nedcargo, earlier access to Working Capital.

4.4.2. Advantages & Disadvantages

Buyer

The suppliers of the buyer have increased availability of Net Working Capital which can result in more reliable deliveries and thus higher service levels. Furthermore, the buyer can get lower costs on the payment because its creditworthiness is used to lower financing costs. However, the implementation costs for structured commodity financing are high and the process is difficult to execute and manage. In general, Structured Commodity Financing is only worthwhile for buyers with more than €1 billion in purchases on an annual basis (Gelsomino, 2017).

Supplier

The supplier reduces its Days Sales Outstanding which increases the availability of Net Working Capital. The financing costs are lowered by using the creditworthiness of the buyer. Lastly, the supplier has more visibility in the cash flow due to contract agreements.

Special Purpose Vehicle

The Special Purpose Vehicle makes a profit by receives an interest rate on top of the funded amount. However, there is the risk of default payment from the buyer.

Financial institution

The financial institution makes a profit by receives an interest rate on top of the funded amount. However, there is the risk of default payment from the Special Purpose Vehicle (Ronald de Boer, 2015).

4.4.3. Cash Benefit

Calculating the cash benefit of Structured Commodity Financing would be too complex at this stage for Nedcargo. Furthermore, Structured Commodity Financing is only suitable for companies with over €1 billion in purchases per year, which Nedcargo does not come close to. However, some of the customers of Nedcargo could potentially offer Structured Commodity Financing to Nedcargo. The benefits of this scenario for Nedcargo would be the same as to those of Reverse Factoring. Nedcargo would receive the invoiced amount earlier which would result in lower financing costs and free up Net Working Capital. Therefore, no cash benefit calculations are made (Gelsomino, 2017).

4.5. Fixed Assets Financing

Fixed Assets Financing is a tactical way of financing fixed assets, such as trucks, for suppliers. The process of Fixed Assets Financing can be found in Figure 4.7.

1. The buyer, who has a higher creditworthiness than the supplier, offers fixed assets financing to the supplier.
2. The buyer loans money from a financial institution against a lower interest rate than the supplier would get.
3. The financial institution provides the buyer with the funds.
4. The buyer uses the loaned amount to finance/purchase fixed asset such as a trucks or barge ship and rents the purchased fixed asset to the supplier including interest.
5. The buyer pays back the bank for the loaned amount including an interest percentage. At the end of the contract, the buyer can sell the fixed asset to the supplier or another party.

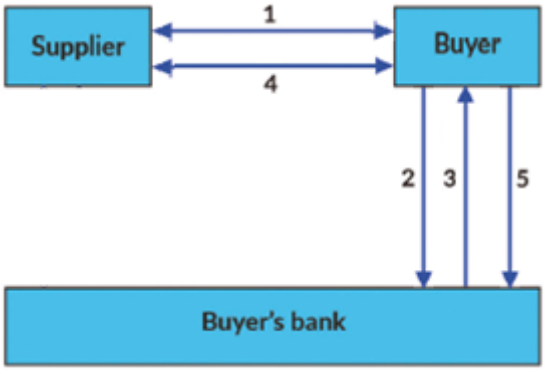

Figure 4.7 Fixed Assets Financing Process

(Investopedia, 2017).

4.5.1. Parties

There are two possibilities for the implementation of Fixed Assets Financing in the supply chain of Nedcargo:

1. Customers could finance the fixed assets of Nedcargo. This will help Nedcargo if the customers have a higher creditworthiness than Nedcargo and will lower the fixed assets financing costs.
2. Nedcargo could offer its suppliers to finance their fixed assets such as trucks and barge ships. This will help the weaker suppliers, who have a lower creditworthiness than Nedcargo, to perform their business activities against lower financing costs.

4.5.2. Advantages & Disadvantages

Buyer

The buyer is able to make a profit by receiving an interest rate between the suppliers interest rate and its own interest rate at the bank. Financing the fixed asset(s) of a supplier will improve the relationship between the buyer and the supplier. If the supplier does not want to purchase the fixed asset, at the end of the contract, the buyer can sell the fixed asset. However, the buyer has the risk of default payment from the supplier but is able to seize the assets that were financed for the supplier in case of default payment.

Supplier

The Fixed Assets Financing interest rate for the supplier is lower than the normal interest rate for the supplier, thus making the loan cheaper. Instead of investing a large sum at once, the supplier is able to gradually pay for the fixed asset. Furthermore, the relationship between the buyer and the supplier improves which may increase service levels. Lastly, the supplier has the chance to purchase the fixed asset from the buyer during or after the contract has ended. However, the supplier has to pay back the loan to the buyer including an interest percentage (Investopedia, 2017).

4.5.3. Cash Benefit

Fixed Assets Financing could be done both ways, from customers and with suppliers, for all fixed assets. Therefore, an example of the cash benefit of financing a truck for a supplier will be used. In this example, the supplier will purchase the fixed asset from Nedcargo.

As an example; the price of a new truck is approximately €82,500.–. The assumption is made that the truck has an economic life time of 8 years with a terminal value of €19,000.– for Nedcargo. This results in an annual write-off of €7,938.– on the book value, see Table 4.5 (Kuiken, 2017) (Heezen, 2012).

*Write-off = New price of the fixed asset – Terminal value * (100% / Economic life time)*

Table 4.5 Book Value Write-Off Truck

Year	Write-off	Cum. Write-off	Book Value
1	€ 7.938	€ 7.938	€ 74.563
2	€ 7.938	€ 15.875	€ 66.625
3	€ 7.938	€ 23.813	€ 58.688
4	€ 7.938	€ 31.750	€ 50.750
5	€ 7.938	€ 39.688	€ 42.813
6	€ 7.938	€ 47.625	€ 34.875
7	€ 7.938	€ 55.563	€ 26.938
8	€ 7.938	€ 63.500	€ 19.000
9	€ -	€ 63.500	€ 19.000
10	€ -	€ 63.500	€ 19.000

Now, assuming that a Nedcargo (customer) would have financed the truck for a supplier, against an interest rate of 1.5% at the bank, while the supplier would have had an interest rate of 3.2%, the interest rate at which the supplier rents the empty handler from Nedcargo is 2.35%. The costs of interest can be found in Appendix XXVII. As long as the interest rate charged by Nedcargo is lower than 3.2%, the offer is interesting for the supplier (Lieshout, 2017).

The costs for Nedcargo consist of the write-off of the debt at the bank and the interest paid over the remainder of the debt. The cash flow in consists of rent which the supplier pays (in this case equal to the write-off at the bank) and interest. However, it takes time for the Nedcargo to receive the full amount of the invested sum back from the supplier. In other terms, the invested sum is not available for investment. Therefore, the cash flow in is annualised with the interest rate of Nedcargo, see Appendix XXVIII (Heezen, 2012) (MathIsFun.com, 2017) (Blas, 2006).

Annualised cash flow in = Cash in / (1 + Interest rate) ^ Time before receiving the sum

Now, the benefit for Nedcargo is calculated as the Net Present Value, see Table 4.6. Nedcargo would have a profit of €4,287.– which is a Return on Investment of 5.2%. The benefit for the supplier would be €3,156.– in interest costs and not having to invest €82,500.– at once. Important to know is that the benefits for both parties increase as the duration of the contract increases (Gelsomino, 2017).

Net Present Value = Annualised rent in + Annualised interest in + Annualised terminal value – Investment

Table 4.6 Cash Benefit Nedcargo Financing a Supplier Truck

Metric	Value
Annualised Rent In	€ 78.357
Annualised Interest In	€ 8.430
Annualised Terminal Value	€ -
Investment	€ 82.500
Net Present Value	€ 4.287
Return On Investment	5,2%
Supplier Interest Benefit	€ 3.156

By changing the parameters, the same calculations can be made for any situation involving Fixed Asset Financing, where a customer finances a fixed asset for Nedcargo or Nedcargo finances a fixed asset for a supplier. However, the cash benefit in terms of financing, both parties should also consider the costs of maintenance. Depending on which party pays for the maintenance and the costs of maintenance, there might not be a cash benefit for both parties.

5. New Situation

In this chapter, the advised situation for Nedcargo and its supply chain will be discussed.

5.1. Strategy

In order to select the right solutions, the Supply Chain strategy of Nedcargo is determined first. Lee's Matched Strategies matrix is a tool used to select the right strategy for a company, see Figure 5.1. The matrix has a lot of similarities with, and combines Fisher's Supply Chain matrix and Christopher's Global Supply Chain matrix. Furthermore, the strategy choice is based on the demand and supply characteristics of a company, see Appendix XXIX. Since Supply Chain Finance relates to all parties in the supply chain, involving both the demand and supply is crucial to selecting the right strategy.

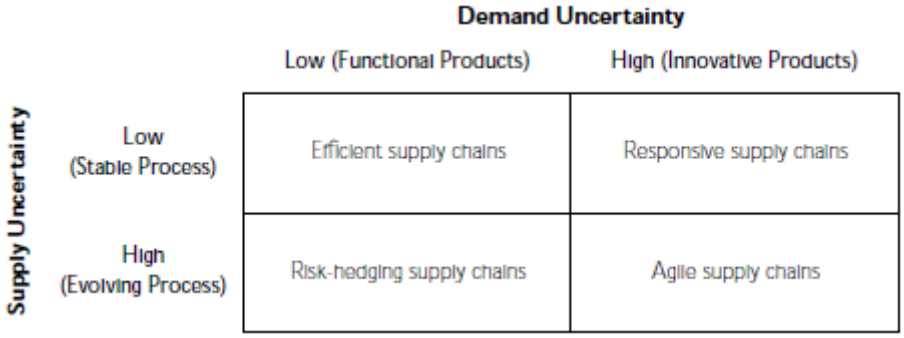

Figure 5.1 Lee's Matched Strategies Matrix

On the demand side, Lee makes a distinction between functional and innovative products. The demand is predictable and stable because transport will not suddenly stop. This also makes the demand more certain. The profit margin in the transportation sector is low as well. Therefore, the services sold by Nedcargo are functional products.

On the supply side, Lee makes a distinction between a stable and evolving supply. As mentioned before, there are a lot of suppliers in the transportation market which offers more supply sources, makes it easier to changeover and thus makes supply more flexible. Therefore, the supply side can be considered as stable.

Based on the demand and supply characteristics, the supply chain strategy of Nedcargo should be efficient. Efficient supply chains focus on gaining a competitive advantage. A competitive advantage can be gained by offering value adding, technical and efficient supply chain solutions such as Supply Chain Finance services. Costs should be saved by; eliminating non-value adding activities (Lean Manufacturing/Muda), using economies of scale, optimise capacity utilisation and sharing information throughout the supply chain. The efficiency strategy matches the strategy of Nedcargo as stated in the annual report of 2015. Nedcargo aims to achieve a wasteless supply chain which result in a competitive advantage.

Nedcargo wants to focus on Supply Chain Finance solutions with its customers for now. However, costs can be saved on both the supply and demand side (CSIMarket Inc., 2017) (Oakley, 2016) (Lee, 2002) (Lieshout, 2017).

5.2. Instrument Selection

Based on the results of the current situation analysis, possible solutions and supply chain strategy, an advice can be given for each of the five Supply Chain Finance instruments.

5.2.1. Dynamic Discounting, Reverse Factoring & Structured Commodity Financing

As the cash benefit calculations show, Dynamic Discounting could offer a cash benefit to all parties in the supply chain by shortening the payment term to a customer with lower interest, or by extending the payment term to a customer with higher interest. However, extending the payment term would require a Net Working Capital investment from the supplier. Shortening the payment term would require a Net Working Capital investment from the customer. This does not mean that there is no benefit, but the cash benefit goes at the costs of the Net Working Capital availability.

Reverse Factoring on the other hand could create a win-win situation for all parties involved. With Reverse Factoring, the supplier will receive earlier payment which frees up Net Working Capital, and

the customer receives an extension of the payment term towards the bank which frees up Net Working Capital. Therefore, Reverse Factoring could be more beneficial in terms of both the cash benefit and Net Working Capital. However, offering Reverse Factoring to the B and C suppliers of Nedcargo may pose as a challenge due to banks not willing to finance such small amounts.

Structured Commodity Financing cannot be offered by Nedcargo to its suppliers. The reason for this is that Nedcargo does not have an annual purchasing value of €1 billion or more. However, some of Nedcargo its customers could potentially offer Structured Commodity Financing to Nedcargo. Structured Commodity Financing would decrease the Days Sales Outstanding and free up Net Working Capital which can be invested by Nedcargo. The cash benefit and effect on the Net Working Capital are the same as they are for Reverse Factoring.

Based on these conclusions, the advice is that Nedcargo should prioritise adopting Reverse Factoring or Structured Commodity Financing from its customers. Both models will create a win-win situation for both parties involved. Dynamic Discounting comes at the costs of higher financing costs or less Net Working Capital, therefore Dynamic Discounting should only be considered as an option if both Reverse Factoring and Structured Commodity Finance are not available.

On the supplier side, the advice is that Nedcargo should prioritise offering Reverse Factoring to its suppliers due to the win-win situation. Dynamic Discounting should only be considered as a second best option if Reverse Factoring is not possible. Some financial institutions, mostly banks, will not accept Reverse Factoring with suppliers that are small due to economies of scale. However, there are privately owned financial institutions that also accept smaller suppliers such as Taulia (Taulia Inc., 2017).

Implementation of Reverse Factoring or Structured Commodity Financing with customers could free up to €10.7 million in Net Working Capital and save €161,143.– in financial costs per year for Nedcargo. With Reverse Factoring, the customer will receive a payment term extension which will also provide the customer with additional Net Working Capital and an interest benefit, see Table 5.1. The potential shown for customers is the potential at a 30 days payment term extension.

Table 5.1 Potential Benefits With Customers

Potential With Customers	A Customers	B Customers	C Customers	Max (ABC Total)
Financing Costs Savings Nedcargo	€ 128.915	€ 24.172	€ 8.057	€ 161.143
Net Working Capital Nedcargo	€ 8.594.316	€ 1.611.434	€ 537.145	€ 10.742.895
Interest Benefit Customers*	€ 49.304	€ 9.245	€ 3.082	€ 61.630
Net Working Capital Customers*	€ 7.043.463	€ 1.320.649	€ 440.216	€ 8.804.329

The implementation of Reverse Factoring with suppliers could free up to €5.8 million in Net Working Capital and save €186,491.– in financing costs per year for suppliers. In addition, Nedcargo could gain more Net Working Capital and an interest benefit by receiving a payment extension from Reverse Factoring, see Table 5.2. The potential shown for Nedcargo is the potential at a 30 days payment term extension.

Table 5.2 Potential Benefits with Suppliers

Potential With Suppliers	A Suppliers	B Suppliers	C Suppliers	Max (ABC Total)
Financing Costs Savings Suppliers	€ 149.193	€ 27.974	€ 9.325	€ 186.491
Net Working Capital Suppliers	€ 4.662.274	€ 874.176	€ 291.392	€ 5.827.843
Interest Benefit Nedcargo*	€ 80.137	€ 15.026	€ 5.009	€ 100.172
Net Working Capital Nedcargo*	€ 5.342.489	€ 1.001.717	€ 333.906	€ 6.678.112

As the tables show, the most savings and additional Net Working Capital can be gained with the A customers and suppliers. The reason for this is that these companies are accountable for 80% of the total costs or revenue. In other words, 80% of the Net Working Capital and financial costs are related to these customers or suppliers. Therefore, Nedcargo should prioritise implementing Supply Chain Finance instruments with the largest customer and suppliers first.

The exact cash benefit that can be gained with each model depends on the number of suppliers and customers with whom the models are implemented. Furthermore, the benefit depends on a lot of

parameters such as interest rates, purchases and sales which are different for each customer or supplier. Because the cash benefit that can be gained is different for each unique situation, the advice is that Nedcargo should make use of the Excel model in order to calculate and consider the results with each customer and supplier. The instruction manual for calculating the cash benefit of Reverse Factoring in the Excel model can be found in Appendix XXX. The instruction manual for calculating the cash benefit of Dynamic Discounting in the Excel model can be found in Appendix XXXI.

5.2.2. Inventory Financing

Because of the sensitivity of the required information, complex calculations and lack of knowledge no cash benefit are calculated for Inventory Financing. Nevertheless, Inventory Financing could be an attractive solution for Nedcargo as it will offer more services to both customers and suppliers. Doing so will result in Nedcargo staying ahead of the competition. Furthermore, it will offer suppliers earlier payment, increase the Net Working Capital of the buyer and may also decrease inventory financing costs. Therefore, the advice is that Nedcargo will execute a pilot of Inventory Financing in order to determine its attractiveness.

5.2.3. Fixed Assets Financing

As the cash benefit calculations show, Fixed Asset Financing could offer a cash benefit to all parties in the supply chain. Furthermore, financing fixed assets of supply chain partners will result in better relationships which may result in higher service levels and an increase in customer orders.

The advice is that Nedcargo starts to offer Fixed Asset Financing to its suppliers. Because of the time it takes for the investment in a fixed asset to be returned, Nedcargo should only consider doing so with reliable suppliers that are frequently used (A suppliers). Nedcargo should also consider asking customers who make frequent use of Nedcargo its services to finance their fixed assets (A customers). But, depending on who is responsible for the costs of maintenance, both parties should compare the costs of maintenance to the cash benefit. A longer contract leads to a higher benefit for both parties.

Because the cash benefit that can be gained depends on the situation, the advice is that Nedcargo should make use of the Excel model in order to consider the results of each unique situation. The instruction manual for calculating the cash benefit of Fixed Asset Financing in the Excel model can be found in Appendix XXXII.

5.3. Implementation Steps & Costs

Fixed Assets Financing only requires different contract agreements and payments. The implementation of Reverse Factoring and Dynamic Discounting consist of four, more comprehensive steps; design, implementation, transaction and post-transaction. It is impossible to give the exact costs of implementation as the costs depend on the model(s) and how often they are used. Furthermore, the buyer (the customer or Nedcargo) might already have an ICT system that is suitable for Reverse Factoring which may result in lower costs. However, a general overview of the implementation costs of Reverse Factoring, based on a case study of 15 companies, can be found in Figure 5.2. The first two phases consist of once-off costs. The last two phases consist of recurring costs (F. Caniato, 2015).

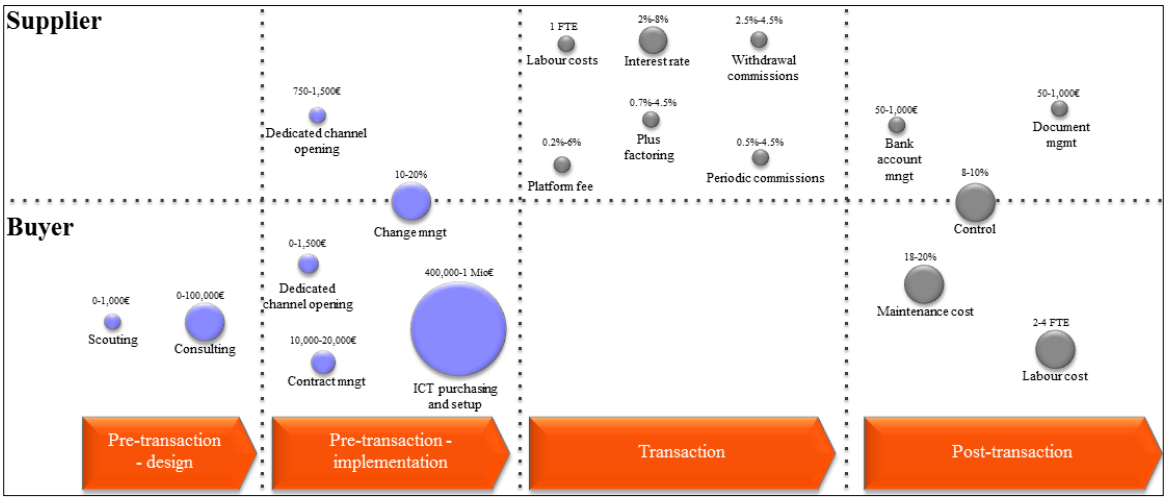

Figure 5.2 Reverse Factoring Implementation Costs

The implementation of Reverse Factoring starts with the design phase. The buyer has to scout and select a financial institution that provides the service which costs up to €1,000.–. PrimeRevenue Inc. and Taulia Inc. are two very well-known examples of Supply Chain Finance service providers. After scouting for a provider, the buyer will have to perform consulting sessions with its suppliers and the service provider. The consulting costs depend on the amount of consultancy sessions and may lead up to €100,000.– (PrimeRevenue Inc., 2017) (Taulia Inc., 2017).

After the suppliers and service provider are on board, the implementation phase starts. First, contracts have to be made between the buyer, supplier, service provider and financial institution. The contract costs range from €10,000.– to €20,000.– and include costs for lawyers and accountants. After the contracts are in order, the buyer will have to invest in a suitable ICT system and has to set up the communication channels. These costs vary from €400,000.– to €1 million, depending on what is needed. However, in most cases, the service provider pays for the platform while the users (buyer and supplier) pay a fee for using the platform. After the entire set-up is complete, the service provider opens the channels for €1,500.– or less which allows for the link between buyer, supplier and the financial institution. The implementation phase is overseen by a change manager which will be discussed in the next paragraph.

Now that the implementation is complete, the transaction phase starts where the supplier uses the system to request early payment. From this point on, all costs are recurring and depend on the usage of the model. The supplier needs about 1 FTE (Full Time Employee, 36 hours) is needed in order to arrange receiving payments with Reverse Factoring. The supplier pays a small fee for using the shared technological platform. All other costs in the transaction phase consist of the programme rate.

The last phase is the post-transaction phase. After the transaction, the supplier will have to regularly manage its bank accounts which costs €50.– to €1,000.–. The documentation will also cost €50.– to €1,000.–. The buyer will make costs related to risk management and maintenance. Finalising the transactions will require 2 to 4 FTE. The post-transaction phase is overseen by a controller which will be discussed in the next paragraph.

In total, the minimum once-off costs for the implementation of Reverse Factoring are €410,000.– for the buyer and €750.– for the supplier. The maximum once-off costs would be €1,122,500.– for the buyer and €1,500.– for the supplier (F. Caniato, 2015).

The implementation costs for Dynamic Discounting would be lower since there are no elaborate contracts. Furthermore, Dynamic Discounting is simpler than Reverse Factoring in terms of managing and control which would require less FTE, no commissions and less control (Gelsomino, 2017).

5.4. Change & Control Management

An important thing to know, when making changes in an organisation, is that change does not come easy. All employees are used to the way things were before the changes took place. The old ways feel reliable and predictable, which makes it hard to change them. Therefore, the employees must be prepared for the changes to come. Furthermore, the changes should cause as minimum disruption as possible. Mainly Reverse Factoring, Structured Commodity Financing and Dynamic Discounting will change the processes. Beside change, monitoring and controlling the process after implementation is crucial to the success as well (Vliet, 2014) (Mind Tools Ltd., 2016) (Prosci, 2014) (Shozo Takata, 2007).

5.4.1. Change Management

The process of change is guided by a change manager. The change manager has the following tasks:

- Reviewing the change propositions
- Discussing the change propositions with the management
- Making a planning for the implementation of the changes
- Informing employees about the changes
- Answering any questions that the employees might have
- Guiding the implementation process
- Guiding the employees through the changes
- Making sure the changes are being used all the time
- Reviewing the changes
- Giving feedback to the management

The change management model of Lewin is designed to guide companies through the stages of change which consists of unfreezing, changing and refreezing. There are two key factors to success when it comes to change, which are time and communication (Vliet, 2014) (Mind Tools Ltd., 2016) (Prosci, 2014) (Shozo Takata, 2007).

The first phase is called 'unfreezing'. During this phase, the management informs the employees what changes are going to take place and how they will affect everyone. Employees now realise that changes are about to come which brings all kinds of emotions with it such as denial, insecurity and doubt. These emotions are caused because everyone feels trusted with the current way of working. In order to minimise these emotions and the impact they have, the change manager must reassure the employees. Therefore, it is important to explain why these changes have to take place and why they are crucial for the future of the company. The employees should be informed well ahead so that they have time to process the information and can mentally prepare for the changes. Any questions regarding the changes should be answered as openly as possible by the management. Furthermore, allowing the employees to think along helps putting their mind at ease as well.

The second phase of change, which is the most challenging, is called 'changing'. The changes must take place in a short period of time. This will show the employees that the changes must be important and that they are crucial for the future of the company.

The last phase of change is called 'refreezing'. In the refreezing phase, the focus is to "force" the employees to work with the changes and make sure the changes are being used all the time. If the employees are not monitored to adapt the changes at all times, they will shortly fall back into the old routines. By closely monitoring the adaptation, with time, the employees will get used to the changes and new way of working. They now feel comfortable and can 'refreeze' to the new ways of working (Vliet, 2014) (Mind Tools Ltd., 2016) (Prosci, 2014) (Shozo Takata, 2007).

5.4.2. Control Management

After implementation, the process of Reverse Factoring (or any of the other models) will have to be controlled. Due to the ever changing interest rates, monitoring the interest rate of the focal company is crucial to knowing whether or not the process is still beneficial. The interest rate should be monitored by Nedcargo for Reverse Factoring with customers, Dynamic Discounting with customers, and Fixed Assets Financing with both suppliers and customers.

In order to do so, when calculating the benefits for a specific model, Nedcargo should also calculate the limit of its interest rate for this situation. The instruction manual for calculating the interest limit can be found in Appendix XXXIII.

5.5. Cost-Benefit Analysis

The cost-benefit analysis is made in order to determine whether or not the benefits outweigh the costs of implementation. Two types of previously calculated data are used:

1. The implementation costs of Reverse Factoring.
2. The interest benefit and Net Working Capital gained by the buyer (who offers Reverse Factoring to its suppliers) due to the received payment term extension.

The cost-benefit analysis for Nedcargo at the minimum implementation costs of €410,000.– can be found in Appendix XXXIV. The cost-benefit analysis for Nedcargo at the minimum implementation costs of €1,122,500.– can be found in Appendix XXXV. For this analysis, the maximum costs of implementation will be used. Part of the table in the appendix can be found in Table 5.3.

Table 5.3 Nedcargo Return on Investment Maximum Costs

Payment Extension	Nedcargo NWC	Interest Benefit	Return Time (Months)	Perpetuity
0	€ -	€ -		€ -
1	€ 211.474	€ 3.339	63,70	€ 211.474
2	€ 422.947	€ 6.678	31,85	€ 422.947
3	€ 634.421	€ 10.017	21,23	€ 634.421
4	€ 845.894	€ 13.356	15,92	€ 845.894
5	€ 1.057.368	€ 16.695	12,74	€ 1.057.368
6	€ 1.268.841	€ 20.034	10,62	€ 1.268.841

The table shows that Net Working Capital that is freed up and the interest benefit related to the payment term extension which is received. Basically, by implementing Reverse Factoring with all A and B suppliers of Nedcargo, receiving a 6 day payment term extension would free up €1.2 million in Net Working Capital. The benefit is higher than the initial investment of €1.1 million. Therefore, the return time is 10.62 months.

Nedcargo will also gain an interest benefit from the received payment term extension. The interest benefit occurs every year for all eternity, therefore, the interest benefit is infinite as well. This phenomenon is called the perpetuity value. A perpetuity interest benefit of €1.2 million would be gained at a 6 day payment term extension. Therefore, the conclusion can be drawn that the benefits outweigh the costs of Reverse Factoring with suppliers (Investopedia, 2017) (Heezen, 2012).

Perpetuity = Net Working Capital / Interest rate Nedcargo

On the customer side, the costs for the implementation of Reverse Factoring are for the customer. However, Nedcargo could potentially free up €10.7 million Net Working Capital and save €161,000.– in financing costs.

Furthermore, by adopting Supply Chain Finance instruments from customers, Nedcargo could potentially increase its sales/revenue. As Reverse Factoring can create a win-win situation, customers will be more satisfied if they can apply the model with Nedcargo. Because of the increase in Net Working Capital for the customer and a better buyer-supplier relationship, the sales of Nedcargo may increase. The increase in revenue can only be assumed, therefore, the revenue at a 1% to 5% increase can be found in Table 5.4.

Table 5.4 Nedcargo Increase in Revenue

Revenue Increase	New Revenue	Additional Revenu
0%	€ 116.332.000	€ -
1%	€ 117.495.320	€ 1.163.320
2%	€ 118.658.640	€ 2.326.640
3%	€ 119.821.960	€ 3.489.960
4%	€ 120.985.280	€ 4.653.280
5%	€ 122.148.600	€ 5.816.600

While the costs are for the customer, Nedcargo thus receives additional net Working Capital, a reduction in financing costs and a possible increase in revenue. Therefore, the conclusion can be drawn that the benefits outweigh the costs of Reverse Factoring with customers.

Conclusion

In this chapter, the most important findings and conclusions will be discussed which will answer the research question:

'Which substantiated advice can be given to Nedcargo International B.V., in which the Supply Chain Finance instrument(s) and the parties with whom the Supply Chain Finance instrument(s) should be implemented are selected, that will optimise the financial flows of all parties in the supply chain of Nedcargo, thus improve/shorten the Cash Conversion Cycle and increase the Net Working Capital availability, and how should the selected Supply Chain Finance instrument(s) be implemented?'

Current Situation

By analysing the financial data of Nedcargo of the year 2016, the Working Capital and Cash Conversion Cycle are calculated. The weighted average Cash Conversion Cycle lies between 9 to 20 days. Both Nedcargo and its customers do not uphold the agreed upon payment terms. Over 63% of all invoices are paid overdue to Nedcargo by customers and over 61% of all invoices are paid overdue to suppliers by Nedcargo.

Nedcargo and its suppliers are making additional financing costs because all parties do not uphold the agreed upon payment terms. The customers and Nedcargo pay after the agreed upon payment terms which causes for additional financing costs. The real finance costs for both the average and weighted average are higher than the payment term finance costs. The financing costs for Nedcargo are €161,143.– on an annual basis, which is €23,559.– or 17.1% higher than it should be. For suppliers, the financing costs are €186,491.– per year, which is €56,874.– or 43.9% higher than it should be.

Nedcargo and its suppliers also have less Net Working Capital available because of the overdue payments. The weighted average accounts receivable of Nedcargo is €10.7 million, which is €1.6 million or 17.1% higher than it should be. The weighted average accounts receivable of the suppliers is €5.8 million, which is €1.8 million or 43.9% higher than it should be.

New Situation

Based on previously conducted research, five models were selected which could potentially be implemented in the supply chain of Nedcargo; Dynamic Discounting, Reverse Factoring, Inventory Financing, Structured Commodity Financing and Fixed Assets Financing.

Dynamic Discounting could offer a cash benefit to all parties in the supply chain by shortening the payment term to a customer with lower interest, or by extending the payment term to a customer with higher interest. However, extending the payment term would require a Net Working Capital investment from the supplier. Shortening the payment term would require a Net Working Capital investment from the customer. This does not mean that there is no benefit, but the cash benefit goes at the costs of the Net Working Capital availability.

Reverse Factoring on the other hand could create a win-win situation for all parties involved. With Reverse Factoring, the supplier will receive earlier payment which frees up Net Working Capital, and the customer receives an extension of the payment term towards the bank which frees up Net Working Capital. Therefore, Reverse Factoring could be more beneficial in terms of both the cash benefit and Net Working Capital. However, offering Reverse Factoring to the C suppliers of Nedcargo may pose as a challenge due to banks not willing to finance such small amounts.

Structured Commodity Financing cannot be offered by Nedcargo to its suppliers. The reason for this is that Nedcargo does not have an annual purchasing value of €1 billion or more. However, some of Nedcargo its customers could potentially offer Structured Commodity Financing to Nedcargo. Structured Commodity Financing would decrease the Days Sales Outstanding and free up Net Working Capital which can be invested by Nedcargo. The cash benefit and effect on the Net Working Capital are the same as they are for Reverse Factoring.

On the customer side, the advice is that Nedcargo should prioritise adopting Reverse Factoring or Structured Commodity Financing from its customers. Both models will create a win-win situation for both parties involved. Nedcargo could save €161,143.– in financing costs and free up €10.7 million in Net Working Capital by adopting Reverse Factoring or Structured Commodity Financing from customers. Customers also benefit because they could gain an interest benefit and additional Net

Working Capital by receiving a payment term extension. Dynamic Discounting comes at the costs of higher financing costs or less Net Working Capital, therefore Dynamic Discounting should only be considered as an option if both Reverse Factoring and Structured Commodity Financing are not available.

Potential With Customers	A Customers	B Customers	C Customers	Max (ABC Total)
Financing Costs Savings Nedcargo	€ 128.915	€ 24.172	€ 8.057	€ 161.143
Net Working Capital Nedcargo	€ 8.594.316	€ 1.611.434	€ 537.145	€ 10.742.895
Interest Benefit Customers*	€ 49.304	€ 9.245	€ 3.082	€ 61.630
Net Working Capital Customers*	€ 7.043.463	€ 1.320.649	€ 440.216	€ 8.804.329

On the supplier side, the advice is that Nedcargo should prioritise offering Reverse Factoring to its suppliers due to the win-win situation. Suppliers could save €186,491.– in financing costs and free up €6.6 million in Net Working Capital by adopting Reverse Factoring from Nedcargo. Nedcargo could also benefit from offering Reverse Factoring to its suppliers by receiving a payment term extension. Dynamic Discounting should only be considered as a second best option if Reverse Factoring is not possible due to the suppliers being too small.

Potential With Suppliers	A Suppliers	B Suppliers	C Suppliers	Max (ABC Total)
Financing Costs Savings Suppliers	€ 149.193	€ 27.974	€ 9.325	€ 186.491
Net Working Capital Suppliers	€ 4.662.274	€ 874.176	€ 291.392	€ 5.827.843
Interest Benefit Nedcargo*	€ 80.137	€ 15.026	€ 5.009	€ 100.172
Net Working Capital Nedcargo*	€ 5.342.489	€ 1.001.717	€ 333.906	€ 6.678.112

As the tables show, the most savings and additional Net Working Capital can be gained with the A customers and suppliers. The reason for this is that these companies are accountable for 80% of the total costs or revenue. In other words, 80% of the Net Working Capital and financial costs are related to these customers or suppliers. Therefore, Nedcargo should prioritise implementing Supply Chain Finance models with the largest customer and suppliers first.

Furthermore, the advice is that Nedcargo starts to offer Fixed Asset Financing to its suppliers. Because of the time it takes for the investment in a fixed asset to be returned, Nedcargo should only consider doing so with reliable suppliers that are frequently used (A suppliers). Nedcargo should also consider asking customers who make frequent use of Nedcargo its services to finance their fixed assets (A customers). A longer contract leads to a higher benefit for both parties.

Lastly, Inventory Financing could be an attractive solution for Nedcargo as it will offer more services to both customers and suppliers. Doing so will result in Nedcargo staying ahead of the competition. Furthermore, it will offer suppliers earlier payment, increase the Net Working Capital of the buyer, and may also decrease inventory financing costs. Therefore, the advice is that Nedcargo will execute a pilot of Inventory Financing in order to determine its attractiveness.

Implementation

Fixed Assets Financing only requires different contract agreements and payments. The implementation of Reverse Factoring and Dynamic Discounting consist of four, more comprehensive steps; design, implementation, transaction and post-transaction. It is impossible to give the exact costs of implementation as the costs depend on the model(s) and how often they are used. Furthermore, the buyer might already have an ICT system that is suitable for Reverse Factoring which may result in lower costs.

The implementation of Reverse Factoring starts with the design phase. The buyer has to scout and select a financial institution that provides the service which costs up to €1,000.–. PrimeRevenue Inc. and Taulia Inc. are two very well-known examples of Supply Chain Finance service providers. After scouting for a provider, the buyer will have to perform consulting sessions with its suppliers and the service provider. The consulting costs depend on the amount of consultancy sessions and may lead up to €100,000.–.

After the suppliers and service provider are on board, the implementation phase starts. First, contracts have to be made between the buyer, supplier, service provider and financial institution. The contract costs range from €10,000.– to €20,000.– and include costs for lawyers and accountants. After the contracts are in order, the buyer will have to invest in a suitable ICT system and has to set up the communication channels. These costs vary from €400,000.– to €1 million, depending on what is needed. However, in most cases, the service provider pays for the platform while the users (buyer and supplier) pay a fee for using the platform. After the entire set-up is complete, the service provider opens the channels for €1,500.– or less which allows for the link between buyer, supplier and the financial institution. The implementation phase is overseen by a change manager which will be discussed in the next paragraph.

Now that the implementation is complete, the transaction phase starts where the supplier uses the system to request early payment. From this point on, all costs are recurring and depend on the usage of the model. The supplier needs about 1 FTE (Full Time Employee, 36 hours) is needed in order to arrange receiving payments with Reverse Factoring. The supplier pays a small fee for using the shared technological platform. All other costs in the transaction phase consist of the programme rate.

The last phase is the post-transaction phase. After the transaction, the supplier will have to regularly manage its bank accounts which costs €50.– to €1,000.–. The documentation will also cost €50.– to €1,000.–. The buyer will make costs related to risk management and maintenance. Finalising the transactions will require 2 to 4 FTE. The post-transaction phase is overseen by a controller which will be discussed in the next paragraph.

In total, the minimum once-off costs for the implementation of Reverse Factoring are €410,000.– for the buyer and €750.– for the supplier. The maximum once-off costs would be €1,122,500.– for the buyer and €1,500.– for the supplier.

The implementation costs for Dynamic Discounting would be lower since there are no elaborate contracts. Furthermore, Dynamic Discounting is simpler than Reverse Factoring in terms of managing and control which would require less FTE, no commissions and less control.

Change Management
In order to implement the changes successfully, the advice is that Nedcargo uses Lewin's Change Management model and assigns a change manager who is responsible for guiding the process of change. Communication and time are two key factors to success when it comes to change. All employees should be prepared for the changes and the management should answer any questions the employees might have. The changes should take place in a time period that is as short as possible, so that employees realise that the changes must be important for the future of the company. Lastly, the management must make sure that the changes are being used all the time so that employees do not fall back into the old routines.

Cost-Benefit
The implementation costs for Reverse Factoring are €410,000.– to €1,122,500.–. If Nedcargo were to invest in Reverse Factoring with the A and B suppliers, receiving a 6 day payment term extension would already free up €1.2 million in Working Capital and generate €1.2 million in perpetuity interest benefit which is €20,000.– in the first year. The suppliers could potentially save €186,000.– in financing costs and free up €5.8 million Working Capital.

Payment Extension	Nedcargo NWC	Interest Benefit	Return Time (Months)	Perpetuity
0	€ -	€ -		€ -
1	€ 211.474	€ 3.339	63,70	€ 211.474
2	€ 422.947	€ 6.678	31,85	€ 422.947
3	€ 634.421	€ 10.017	21,23	€ 634.421
4	€ 845.894	€ 13.356	15,92	€ 845.894
5	€ 1.057.368	€ 16.695	12,74	€ 1.057.368
6	€ 1.268.841	€ 20.034	10,62	€ 1.268.841

On the customer side, the customer pays the investment for Reverse Factoring with Nedcargo. Nedcargo could potentially save €161,000.– in financing costs per year and free up €10.7 million

Working Capital. Furthermore, the customer will benefit in terms of an interest benefit and additional Working Capital. Lastly, a stronger buyer-supplier relationship may result in additional revenue for Nedcargo.

The exact cash benefit that can be gained with each model depends on the number of suppliers and customers with whom the models are implemented. Furthermore, the benefit depends on a lot of parameters such as interest rates, purchases and sales which are different for each customer or supplier. Because the cash benefit that can be gained is different for each unique situation, the advice is that Nedcargo should make use of the Excel model in order to calculate and consider the results with each customer and supplier.

Furthermore, the interest rate of Nedcargo changes every three months. Since the models may no longer be beneficial at certain interest rates, Nedcargo should monitor the interest rate every three months in order to determine whether or not a contract is still beneficial.

Lastly, by adopting Supply Chain Finance instruments from customers, Nedcargo could potentially increase its sales/revenue. As Reverse Factoring can create a win-win situation, customers will be more satisfied if they can apply the model with Nedcargo. Because of the increase in Net Working Capital for the customer and a better buyer-supplier relationship, the sales of Nedcargo may increase. The increase in revenue can only be assumed.

Revenue Increase	New Revenue	Additional Revenu
0%	€ 116.332.000	€ -
1%	€ 117.495.320	€ 1.163.320
2%	€ 118.658.640	€ 2.326.640
3%	€ 119.821.960	€ 3.489.960
4%	€ 120.985.280	€ 4.653.280
5%	€ 122.148.600	€ 5.816.600

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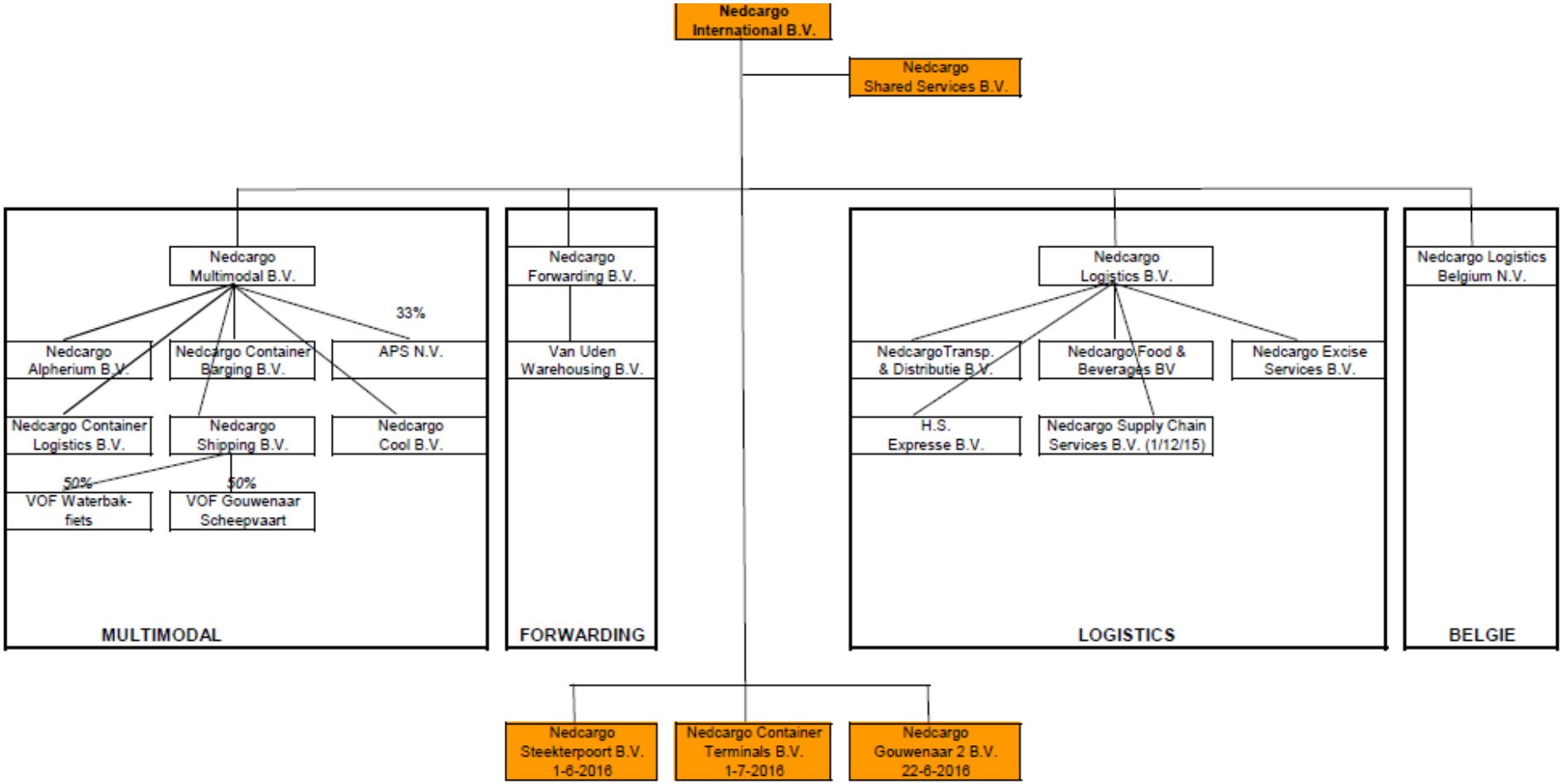
Appendices – ALL APPENDICES ARE CONFIDENTIAL

Appendix I. Nedcargo Legal Structure



Appendix II. Logistics Service Providers Statistics

Onderwerpen	Totaal bedrijven					
Perioden	2015 4e kwartaal	2016 1e kwartaal*	2016 2e kwartaal*	2016 3e kwartaal*	2016 4e kwartaal*	2017 1e kwartaal*
Bedrijfstakken/branches SBI 2008	*aantal*					
42112 Stratenmakersbedrijven	4 140	4 150	4 135	4 170	4 200	4 205
4212 Aanleg van spoorwegen	60	60	65	70	75	75
4213 Bouw van viaducten en tunnels	70	70	75	75	75	65
4311 Sloopbedrijven	1 025	1 045	1 055	1 065	1 080	1 090
43222 Verwarmingsinstallatiebedrijven	3 250	3 260	3 280	3 320	3 335	3 335
4333 Vloer- en wandafwerkingsbedrijven	7 160	7 250	7 285	7 415	7 470	7 505
4391 Dakbouwbedrijven	2 815	2 845	2 865	2 930	2 965	2 975
4399 Overige gespecialiseerde bouw	11 995	12 140	12 410	12 550	12 640	12 660
45112 Handel en reparatie personenauto's	18 555	18 610	18 695	18 985	19 135	19 215
454 Handel en reparatie van motorfietsen	1 715	1 710	1 695	1 720	1 745	1 755
46212 Groothandel in zaden	230	230	220	225	225	230
46422 Groothandel in werkkleding	475	470	475	475	465	465
46425 Groothandel in modeartikelen	500	490	495	490	470	470
46473 Groothandel in verlichting	710	715	715	730	730	735
46699 Groothandel in overige machines	2 930	2 900	2 880	2 845	2 815	2 095
46712 Groothandel in overige brandstof	255	250	245	250	250	255
46713 Groothandel overige minerale olie	170	170	175	175	175	180
4673 Groothandel in bouwmaterialen	5 220	5 220	5 175	5 170	5 155	5 200
4676 Groothandel overige tussenproducten	335	335	340	340	335	345
46762 Groothandel in papier en karton	130	125	130	125	120	120
469 Niet-gespecialiseerde groothandel	3 480	3 495	3 520	3 525	3 465	2 490
474 Winkels in consumentenelektronica	2 565	2 560	2 565	2 570	2 555	2 550
47513 Winkels in handwerken en breiwol	390	390	390	390	390	385
47644 Winkels in kampeerartikelen	55	55	55	55	55	55
47716 Winkels in onderkleding	580	580	580	580	580	570
504 Binnenvaart (vracht- en sleepvaart)	3 205	3 190	3 170	3 165	3 170	3 145
5040 Binnenvaart (vracht- en sleepvaart)	3 205	3 190	3 170	3 165	3 170	3 145
50401 Binnenvaart (vrachtvaart)	2 660	2 650	2 630	2 625	2 625	2 600
511 Personenvervoer door de lucht	295	295	305	305	310	305
52 Opslag, dienstverlening voor vervoer	6 840	6 935	7 700	7 785	7 825	7 880
5210 Opslag	750	760	760	765	770	775
52102 Opslag in koelhuizen	165	165	160	155	155	160
52109 Distributiecentra, overige opslag	535	545	550	565	565	570
52241 Laad- en losbedrijven (zeevaart)	195	200	205	205	205	200
52291 Tussenpersonen in vrachtvervoer	2 540	2 535	2 565	2 585	2 575	2 570

Appendix III. List of Interviewees

Function	Respondent number
CEO / Founder	#1
CEO / Founder	#2
CFO	#3
Logistics Director	#4
Manager Multimodal	#5
Manager Forwarding	#6
Manager Logistics België	#7
Manager Transport & Distribution	#8
Operational Manager Multimodal	#9
Manager Supply Chain Engineering	#10
Supply Chain Engineer	#11
Supply Chain Engineer	#12
Fleetmanager Benelux	#13
Financial Controller	#14
Business Controller	#15
Business Development Manager	#16
Sr. Account manager	#17

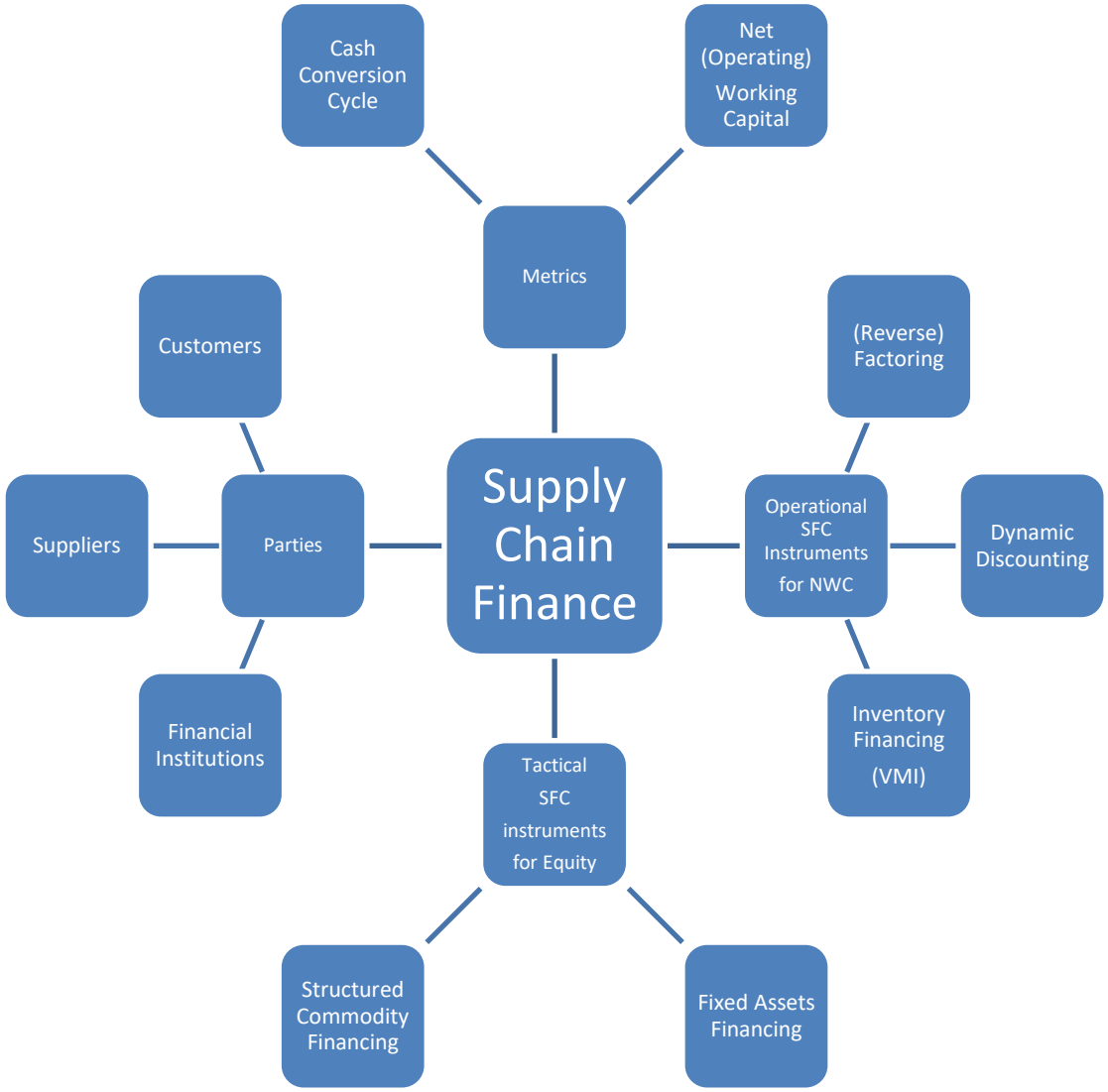
Appendix IV. Interview Questions

Section		Questions	
1		The company and the interviewee	Variables measured
	a	Please describe your role within the organisation Omschrijf uw rol in de organisatie	Self-serving / partnerships
	b	How does Nedcargo position itself within the Supply Chain Hoe positioneert Nedcargo zichzelf in de supply chain	Self-serving / partnerships / Willingness
	c	Is there standardisation amongst customers and Nedcargo in the use of IT and cash management systems? How? Is er een standaardisatie bij klanten en Nedcargo omtrent het gebruik van IT and cash management systems, zoja hoe?	Self-serving / partnerships / Willingness
	d	Is there visibility amongst the Supply Chain concerning standardisation and use of ERP systems? Is er zichtbaarheid te midden van de supply chain betreffende standaardisatie en gebruik van ERP systemen?	Self-serving / partnerships / Willingness
2		SCF applications - General information	
	a	What is the position/policy of Nedcargo in relation to adopting SCF solutions for the long term perspective? Wat is de positie / beleid van Nedcargo in relatie tot de adoptie van SCF oplossingen voor de lange termijn?	Willingness
	b	Concerning the long term perspective, do you consider SCF as a supporting factor in achieving this? Betreffende het lange termijn perspectief, zie je SCF als een ondersteunende factor in het bereiken hiervan?	Willingness
	c	What are the main barriers for implementing SCF instruments? Wat zijn de voornaamste barrières voor het implementeren van SCF instrumenten?	Willingness
	d	Would you be willing to recieve training in learning about the different SCF instruments?	Willingness

	Zou je bereid zijn om training te ontvangen betreffende leren over de verschillende SCF instrumenten?	
e	Is knowledge shared throughout the organisation, or stays knowledge in a department? Wordt er kennis gedeeld door de gehele organisatie, of blijft de kennis in een afdeling?	Knowledge
f	Do you collaborate with personnel from other functions? How? Werk je samen met personeel die andere functies bekleden? Hoe?	Knowledge
g	Is there a lack of skilled personnel and training concering SCF instruments? Is er een gebrek van getalenteerd personeel en training betreffende SCF instrumenten?	Knowledge
h	Have you heard of SCF before the information session of the 1st of December? Heeft u eerder gehoord over het onderwerp SCF, voordat de sessie van 1 december plaatsvond?	Knowledge
i	What is the level of knowledge within Nedcargo concerning SCF? Wat is het niveau van kennis betreffende SCF binnen Nedcargo?	Knowledge
j	With a better understanding of SCF, how do you see SCF as a potential competitive advantage? Met een beter begrip van SCF, hoe ziet u SCF als een potentieel duurzaam voordeel (competitive advantage?)	Knowledge
k	What is the IT level of trade processes? Wat is het IT niveau van handelprocessen?	Level of digitalisation
l	What the level of integration with a customers ERPs systems? Wat is het niveau van integratie met het ERP systeem van een klant?	Level of digitalisation
m	Is the IT of Nedcargo flexible enough to integrate SCF IT instruments Is de IT van Nedcargo flexibel genoeg om te integreren met SCF IT instrumenten?	Level of digitalisation
n	Is there a lack of standardisation in exchange of invoices? What is the cause? Is er een gebrek aan standaardisatie in het uitwisselen van facturen? Wat is de oorzaak?	Level of digitalisation
o	Does Nedcargo invest in IT related instruments, performances? Why? Why not? Investeert Nedcargo in IT gerelateerde instrumenten, prestatie? Waarom, waarom niet?	Level of digitalisation
p	Can Nedcargo easily access additional funding via traditional channels? Kan Nedcargo gemakkelijk toegang krijgen tot additionele financiering?	Finance
q	Is the demand, and flow of goods (un)predictable in the Supply Chain? Is de vraag, en stroom van goederen (on)voorspelbaar in de Supply Chain?	Finance
s	What is the working capital of Nedcargo? Do you consider this sufficient / unsufficient? Wat is het werkkapitaal van Nedcargo? Beschouw je dit als (on)voldoende	Finance

	t	Are there impediments in the financing capabilities of Nedcargo? Zijn er belemmeringen in de financieringsmogelijkheden van Nedcargo?	Finance
3	Miscellaneous questions		
	a	What is your general view on SCF? Please elaborate Wat is uw algemene beeld omtrent SCF? Kunt u dit nader omschrijven?	Objective
	b	What project/model/solutions do you find more promising? Why? Welk project/model/oplossingen vind u veelbelovend? Waarom?	Objective
	c	Are there any risks by implementing a SCF instrument in Nedcargo concerning your role in the organization? Which risks? Zijn er risico's door de uitvoering van een SCF instrument in Nedcargo, als u het vanuit uw rol bekijkt? Welke risico's zijn dit?	Tangible results
	d	Is Nedcargo going to benefit from implementing a SCF instrument? How? Gaat Nedcargo voordeel behalen door het implementeren van een SCF instrument? Hoe?	Tangible results
	e	Is a SCF service going to support Nedcargo in the continuation of the company? In which ways? Zal een SCF service Nedcargo ondersteunen in het continueren van het bedrijf? In wat voor een manier?	Tangible results

Appendix V. Mind Map Supply Chain Finance Nedcargo



Appendix VI. Sub- and Operational Questions

1. Why is this research being conducted?
    a. What is Supply Chain Finance?
    b. Why is Supply Chain Finance relevant?

2. What does the previous research say?
    a. What was researched previously?
    b. How was the previous research conducted?
    c. What are the results of the previous research?
    d. How do the results of the previous research lead to this thesis?

3. What is the current situation of Nedcargo?
    a. What does the ABC-analysis look like?
    b. Which clusters should be distinguished in the supply chain of Nedcargo?
    c. What is the current Cash Conversion Cycle of Nedcargo per cluster?
    d. What is the current Net Working Capital of Nedcargo per cluster?
    e. What is the supply chain strategy of Nedcargo? (financial, delivery or social performance)
    f. Does Nedcargo want to focus on suppliers? (improve supply chain)
    g. Does Nedcargo want to focus on customers? (improve financial gain)

4. Which Supply Chain Finance possibilities are there for Nedcargo?
    Inventory Financing
    a. What is inventory financing?
    b. What are the advantages of inventory financing?
    c. What are the disadvantages of inventory financing?
    d. With which customers Nedcargo already has inventory financing?
    e. What are the terms and conditions?

    Structured Commodity Financing
    f. What is structured commodity financing?
    g. What are the advantages of structured commodity financing?
    h. What are the disadvantages of structured commodity financing?
    i. With which customers Nedcargo already has structured commodity financing?
    j. What are the terms and conditions?

    Fixed Assets Financing
    k. What is fixed assets financing?
    l. What are the advantages of fixed assets financing?
    m. What are the disadvantages of fixed assets financing?
    n. With which customers Nedcargo already has fixed assets financing?
    o. What are the terms and conditions?

    Reverse Factoring Customers
    p. What is reverse factoring from customer?
    q. What are the advantages of reverse factoring from customers?
    r. What are the disadvantages of reverse factoring from customers?
    s. With which customer Nedcargo already has reverse factoring? (long term contracts, trade volume)
    t. What are the terms and conditions?
    u. What are potential customers with which Nedcargo could use reverse factoring?
    v. Are these customers willing to use reverse factoring with Nedcargo?
    w. What is the min and max interest rate for reverse factoring for Nedcargo?
    x. What is the cash benefit of reverse factoring?

Reverse Factoring suppliers
    y. What is reverse factoring to suppliers?
    z. What are the advantages of reverse factoring to suppliers?
    aa. What are the disadvantages of reverse factoring to suppliers?
    bb. With which suppliers Nedcargo already has reverse factoring? (long term contracts, trade volume)

cc. What are the terms and conditions?
dd. What are potential suppliers with which Nedcargo could use reverse factoring?
ee. Are these suppliers willing to use reverse factoring with Nedcargo?
ff. What is the min and max interest rate for reverse factoring for Nedcargo?
gg. What is the cash benefit of reverse factoring with suppliers?

Dynamic Discounting Suppliers

hh. What is dynamic discounting with suppliers?
ii. What are the advantages of dynamic discounting with suppliers?
jj. What are the disadvantages of dynamic discounting with suppliers?
kk. With which suppliers Nedcargo already has dynamic discounting?
ll. What are the terms and conditions?
mm. What are the potential suppliers with which Nedcargo could use dynamic discounting?
nn. Are these suppliers willing to use dynamic discounting with Nedcargo?
oo. What is the min and max discount rate for dynamic discounting for Nedcargo?
pp. What is the cash benefit of dynamic discounting with suppliers?

Dynamic Discounting Customers

qq. What is dynamic discounting for customer? (Southern-Europe)
rr. What are the advantages of dynamic discounting for customers?
ss. What are the disadvantages of dynamic discounting for customers?
tt. With which customers Nedcargo already has dynamic discounting?
uu. What are the terms and conditions?
vv. What are the potential customers with which Nedcargo could use dynamic discounting?
ww. Are these customers willing to use dynamic discounting?
xx. What is the min and max discount rate for dynamic discounting for Nedcargo?
yy. What is the cash benefit of dynamic discounting for Nedcargo?

5. Which Supply Chain Finance instrument(s) should be implemented?
   a. Which of the five Supply Chain Finance instrument should be implemented?
   b. For which parties should this Supply Chain Finance instrument be implemented?
   c. How should this Supply Chain Finance instrument be implemented?

Appendix VII. Financial Ratios Parameters

Parameter	2014	2015	2016
Revenue	€ 98.522.000	€ 104.785.000	€ 116.332.000
Cost Of Sales/Costs To Serve	€ 53.190.444	€ 57.460.344	€ 57.034.733
Gross Profit	€ 45.331.556	€ 47.324.656	€ 59.297.267
EBIT	€ 1.612.000	€ 2.579.000	€ 2.441.009
Net Profit	€ 21.000	€ 478.000	€ 1.150.000
Capital	€ 43.167.128	€ 51.104.214	€ 55.092.948
Current Assets/Short-Term Revenue	€ 31.323.842	€ 37.752.398	€ 39.918.957
Assets: Debtors & Excise	€ 28.348.821	€ 34.249.282	€ 35.137.242
Assets: Claims Participants	€ 688.635	€ 1.500	€ 3.915
Assets: Other Taxes	€ -	€ -	€ 60.410
Assets: Other	€ 2.267.832	€ 2.105.277	€ 2.781.047
Assets: Liquids	€ 17.204	€ 1.396.338	€ 1.936.343
Current Liabilities/Short-Term Debt	€ 31.308.324	€ 37.314.361	€ 40.109.577
Liabilities: Credit Institutions	€ 2.469.561	€ 1.813.607	€ 5.847.077
Liabilities: Repayment Of Debt	€ 584.961	€ 1.136.402	€ 1.307.765
Liabilities: Creditors & Excise	€ 22.723.290	€ 27.357.072	€ 26.810.642
Liabilities: Corporation Taxes	€ 1.244.711	€ 1.647.149	€ 24.163
Liabilities: Other Taxes	€ 1.028.973	€ 1.698.648	€ 1.842.335
Liabilities: Other	€ 3.256.828	€ 3.661.540	€ 4.277.595
Equity	€ 364.007	€ 849.440	€ 2.179.201
Total Debt	€ 41.014.434	€ 48.422.394	€ 51.356.929
Long-Term Debt	€ 9.706.110	€ 11.108.033	€ 11.247.352
Loans Participants	€ 7.200.000	€ 7.200.000	€ 7.200.000
Interest-Bearing Debt	€ 12.760.622	€ 14.058.042	€ 18.402.194
Interest	€ 718.753	€ 584.573	€ 701.745
Excise	€ 14.741.413	€ 16.950.044	€ 18.170.813

Appendix VIII. Financial Ratios

Performance	Key Figure	Calculation	2014	2015	2016	Norm
Profitability	Return On Capital	EBIT / Avg. Capital	7,47%	5,47%	4,60%	+
	Return On Equity	Net Profit / Avg. Equity	11,54%	78,78%	75,94%	>Bankinterest 0,15% till €5 mln
	Costs Of Debt	Interest / Avg. Debt	1,75%	1,31%	1,41%	
	Costs Of Interest Bearing Debt	Interest / Avg. Interest Bearing Debt	11,27%	4,36%	4,32%	5-10%
	Leverage Capital/Debt	Return On Capital <=> Costs Of Debt	-3,80%	1,11%	0,27%	Ret. On Cap. > Costs Of Interest Debt
	Gross Profit Margin	Gross Profit / Revenue	46,01%	45,16%	50,97%	
	Pretax Profit Margin	EBIT / Revenue	1,64%	2,46%	2,10%	+
	Net Profit Margin	Net Profit / Revenue	0,02%	0,46%	0,99%	+
	Return On Assets	Net Profit / Current Assets	0,07%	1,27%	2,88%	+
Solvancy	Solvency	Equity / Capital	0,84%	1,66%	4,0%	
	Solvency Risk-Bearing Debt	(Equity + Participants) / (Capital - Excise)	26,61%	23,57%	25,40%	25%-40%
Liquidity	Current Ratio	Current Assets / Current Liabilities	1,00	1,01	1,00	1-1,5
	Net Working Capital	Current Assets / Current Liabilities	€ 15.518	€ 438.037	€ -190.620	
Debt Ratios	Debt Ratio	Debt / Capital	95,01%	94,75%	93,22%	
	Debt-Equity Ratio	Debt / Equity	112,67	57,01	23,57	
	Capitalization Ratio	Long-Term Debt / (Long-Term Debt + Equity)	96,39%	92,90%	83,77%	
	Interest Coverage Ratio	EBIT / Interest	2,24	4,41	3,48	3-5

Appendix IX. Nedcargo Administration Numbers

Business Unit	Adm. Number	Company Name
Forwarding	400	Nedcargo Forwarding B.V.
	401	Van Uden Warehousing B.V.
Multimodal	402	Nedcargo Container Barging B.V.
	403	Nedcargo Container Logistics B.V.
	404	Nedcargo Alpherium B.V.
	405	Nedcargo Multimodal B.V.
Logistics	500	Nedcargo logistics B.V.
	510	Nedcargo Transport & Distributie B.V.
	520	Nedcargo Food & Beverages B.V.
	540	Nedcargo Excise Services B.V.
	550	Nedcargo Supply Chain Services B.V.
	590	Nedcargo Shared Services B.V.

Appendix X. Nedcargo Intercompany Debtor & Creditor Numbers

Company Name	Debtor Number	Creditor Number
Nedcargo Forwarding B.V.	951	20023/20028
Van Uden Warehousing B.V.	20025	20032
Nedcargo Container Barging B.V.	20026/472	20026/472
Nedcargo Container Logistics B.V.	20021/6174	20021/6174
Nedcargo Alpherium B.V.	20024/8006	20029/8006/4516
Nedcargo Multimodal B.V.	20028	
Nedcargo International B.V.	20023/1100	20024/396/4511
Gouwenaar Scheepvaart V.O.F.		4022/9006
Nedcargo logistics B.V.	20002/3552	20002
Nedcargo Transport & Distributie B.V.	20001/6293	20001/6293
Nedcargo Food & Beverages B.V.	20000	20000
Nedcargo Excise Services B.V.		20006
Nedcargo Supply Chain Services B.V.		20033
Nedcargo Shared Services B.V.	20007/12330/4670	20031/12330/12062/912330
Nedcargo Logistics Belgium N.V.	317	787

Appendix XI. Net Operating Working Capital Fluctuation

Date	Debtors	Creditors	NOWC
4-1-2016	€ 12.964.872	€ 7.505.408	€ 5.459.464
15-2-2016	€ 12.393.984	€ 4.655.789	€ 7.738.195
29-2-2016	€ 11.575.321	€ 5.525.626	€ 6.049.695
14-3-2016	€ 12.616.164	€ 4.623.629	€ 7.992.535
29-3-2016	€ 12.990.793	€ 4.945.232	€ 8.045.560
11-4-2016	€ 12.602.149	€ 4.424.286	€ 8.177.863
25-4-2016	€ 12.683.939	€ 5.331.610	€ 7.352.329
9-5-2016	€ 12.160.893	€ 4.919.739	€ 7.241.154
23-5-2016	€ 11.989.048	€ 5.700.308	€ 6.288.741
12-6-2016	€ 13.780.947	€ 5.264.312	€ 8.516.635
18-7-2016	€ 13.729.964	€ 6.712.378	€ 7.017.586
1-8-2016	€ 14.651.936	€ 5.990.720	€ 8.661.215
15-8-2016	€ 14.483.903	€ 5.121.722	€ 9.362.181
12-9-2016	€ 13.192.749	€ 4.545.938	€ 8.646.812
26-9-2016	€ 14.271.231	€ 6.441.797	€ 7.829.434
10-10-2016	€ 14.232.421	€ 5.548.170	€ 8.684.251
24-10-2016	€ 12.957.302	€ 5.487.848	€ 7.469.454
7-11-2016	€ 12.890.021	€ 4.994.271	€ 7.895.750
21-11-2016	€ 13.360.930	€ 5.035.923	€ 8.325.008
5-12-2016	€ 12.407.610	€ 4.083.159	€ 8.324.451
19-12-2016	€ 13.214.530	€ 5.026.146	€ 8.188.384
2-1-2017	€ 13.211.267	€ 6.664.508	€ 6.546.758
16-1-2017	€ 13.026.987	€ 7.831.125	€ 5.195.862
7-2-2017	€ 12.113.163	€ 7.997.338	€ 4.115.825
20-2-2017	€ 11.849.834	€ 8.391.093	€ 3.458.741
27-2-2017	€ 11.452.906	€ 6.622.508	€ 4.830.398
Average	**€ 12.954.033**	**€ 5.745.792**	**€ 7.208.241**

Appendix XII. Cash Conversion Cycle Logistics

Table XII.I Nedcargo Logistics DSO

Adm. Number	Transactions	On Time	Overdue	Avg. Payment Term	Avg. DSO	Days +/-	%Overdue
500	20	5	15	19,6	61,3	41,7	75,0%
510	510	152	358	26,9	29,5	2,6	70,2%
520	7300	2609	4691	29,3	35,0	5,7	64,3%
590	3	3	0	60,0	31,3	-28,7	0,0%
Total	**7833**	**2769**	**5064**	**29,1**	**34,7**	**5,6**	**64,6%**

Table XII.II Nedcargo Logistics Invoice Lead-time

Week	Day	Days Waiting
Week 1	Monday	9
	Tuesday	8
	Wednesday	7
	Thursday	6
	Friday	5
	Saturday	
	Sunday	
Week 2	Monday	
	Tuesday	
	Wednesday	Send Week 1 Invoices
Average	**Invoice Leadtime**	**7**

Table XII.III Nedcargo Logistics DPO

Adm. Number	Transactions	On Time	Overdue	Avg. Payment Term	Avg. DPO	Days +/-	%Overdue
500	317	127	190	17,7	21,5	3,9	59,9%
510	7267	525	6742	24,0	36,2	12,2	92,8%
520	5037	526	4511	23,2	40,1	16,9	89,6%
590	1583	136	1447	21,7	33,8	12,1	91,4%
Total	**14204**	**1314**	**12890**	**23,3**	**37,0**	**13,7**	**90,7%**

Appendix XIII. Cash Conversion Cycle Forwarding

Table XIII.I Nedcargo Forwarding DSO

Adm. Number	Transactions	On Time	Overdue	Avg Payment Term	Avg DSO	Days +/-	%Overdue
400	10458	3180	7278	28,0	41,1	13,1	69,6%
Total	10458	3180	7278	28,0	41,1	13,1	69,6%

Table XIII.II Nedcargo Forwarding DPO

Adm. Number	Transactions	On Time	Overdue	DPO Term	Avg DPO	Days +/-	%Overdue
400	15215	5603	9612	26,78	42,42	15,64	63,17%
Total	15215	5603	9612	26,78	42,42	15,64	63,17%

Appendix XIV. Cash Conversion Cycle Multimodal

Table XIV.I Nedcargo Multimodal DSO

Adm. Number	Transactions	On Time	Overdue	Avg Payment Term	Avg DSO	Days +/-	%Overdue
402	9022	4252	4770	29,0	34,1	5,1	52,9%
403	475	258	217	28,2	52,0	23,8	45,7%
404	5063	774	4289	29,2	49,2	20,0	84,7%
Total	14560	5284	9276	29,1	40,0	10,9	63,7%

Table XIV.II Nedcargo Multimodal DPO

Adm. Number	Transactions	On Time	Overdue	Avg Payment Term	Avg DPO	Days +/-	%Overdue
402	709	408	301	28,7	35,5	6,8	42,5%
403	890	412	478	23,1	52,7	29,5	53,7%
404	1786	489	1297	18,7	39,0	20,3	72,6%
Total	3385	1309	2076	22,0	41,8	19,9	61,3%

Appendix XV. ABC-Analysis Customers

Debtor	Invoice	Sum Revenue	%Revenue	%Cum	ABC
53	1112	€ 9.894.517	9,24%	9,24%	A
63	892	€ 8.641.687	8,07%	17,30%	A
3	427	€ 6.191.798	5,78%	23,08%	A
35	89	€ 5.073.507	4,74%	27,82%	A
4	130	€ 4.921.142	4,59%	32,41%	A
4462	164	€ 4.431.298	4,14%	36,55%	A
630	139	€ 3.808.421	3,56%	40,11%	A
1111	1475	€ 2.398.736	2,24%	42,35%	A
8195	85	€ 2.350.096	2,19%	44,54%	A
656	232	€ 2.032.769	1,90%	46,44%	A
49	418	€ 1.780.129	1,66%	48,10%	A
649	104	€ 1.737.920	1,62%	49,72%	A
616	107	€ 1.676.409	1,56%	51,29%	A
52	166	€ 1.609.525	1,50%	52,79%	A
329	106	€ 1.442.957	1,35%	54,14%	A
8006	111	€ 1.406.569	1,31%	55,45%	A
390	99	€ 1.369.845	1,28%	56,73%	A
360	65	€ 1.269.012	1,18%	57,91%	A
601	115	€ 1.197.309	1,12%	59,03%	A
4027	146	€ 1.189.549	1,11%	60,14%	A
648	278	€ 1.156.846	1,08%	61,22%	A
10	702	€ 1.130.512	1,06%	62,28%	A
2	223	€ 1.031.534	0,96%	63,24%	A
4326	108	€ 1.029.765	0,96%	64,20%	A
611	134	€ 987.883	0,92%	65,12%	A
663	66	€ 973.554	0,91%	66,03%	A
394	50	€ 968.558	0,90%	66,94%	A
84	173	€ 951.813	0,89%	67,82%	A
4572	318	€ 928.019	0,87%	68,69%	A
4492	318	€ 923.625	0,86%	69,55%	A
4396	467	€ 915.839	0,85%	70,41%	A
615	97	€ 897.178	0,84%	71,25%	A
1209	110	€ 876.973	0,82%	72,06%	A
4454	231	€ 830.632	0,78%	72,84%	A
4071	88	€ 763.704	0,71%	73,55%	A
667	31	€ 740.993	0,69%	74,24%	A
39	69	€ 672.972	0,63%	74,87%	A
37	63	€ 670.714	0,63%	75,50%	A
4493	397	€ 657.653	0,61%	76,11%	A
417	193	€ 622.074	0,58%	76,69%	A
658	97	€ 594.877	0,56%	77,25%	A
631	113	€ 590.129	0,55%	77,80%	A
4386	53	€ 557.652	0,52%	78,32%	A
4037	827	€ 555.864	0,52%	78,84%	A
4414	305	€ 534.976	0,50%	79,34%	A
622	97	€ 526.223	0,49%	79,83%	A
422	126	€ 500.479	0,47%	80,30%	B
614	203	€ 474.700	0,44%	80,74%	B
4479	80	€ 470.267	0,44%	81,18%	B
8454	144	€ 441.198	0,41%	81,59%	B
1143	64	€ 424.770	0,40%	81,99%	B

86	120	€	423.859	0,40%	82,38%	B
4249	1376	€	400.942	0,37%	82,76%	B
639	62	€	367.018	0,34%	83,10%	B
4338	248	€	365.939	0,34%	83,44%	B
4267	41	€	353.687	0,33%	83,77%	B
4288	67	€	351.935	0,33%	84,10%	B
4126	619	€	348.459	0,33%	84,43%	B
610	114	€	337.007	0,31%	84,74%	B
397	36	€	333.648	0,31%	85,05%	B
619	74	€	330.301	0,31%	85,36%	B
612	148	€	320.472	0,30%	85,66%	B
666	56	€	298.074	0,28%	85,94%	B
420	79	€	296.555	0,28%	86,22%	B
41	94	€	257.840	0,24%	86,46%	B
430	66	€	257.053	0,24%	86,70%	B
637	52	€	246.705	0,23%	86,93%	B
609	77	€	242.068	0,23%	87,15%	B
4619	239	€	216.643	0,20%	87,35%	B
1412	62	€	216.140	0,20%	87,56%	B
4111	354	€	206.576	0,19%	87,75%	B
4133	143	€	205.076	0,19%	87,94%	B
276	44	€	204.676	0,19%	88,13%	B
4236	122	€	194.096	0,18%	88,31%	B
4240	251	€	193.606	0,18%	88,49%	B
8476	704	€	193.516	0,18%	88,67%	B
4547	122	€	192.831	0,18%	88,85%	B
4279	311	€	189.430	0,18%	89,03%	B
22	317	€	184.554	0,17%	89,20%	B
96	58	€	182.375	0,17%	89,37%	B
88	57	€	179.147	0,17%	89,54%	B
4430	622	€	176.678	0,16%	89,71%	B
707	64	€	176.653	0,16%	89,87%	B
4102	175	€	169.028	0,16%	90,03%	B
1454	18	€	166.073	0,16%	90,18%	B
4101	35	€	160.845	0,15%	90,33%	B
10082	238	€	152.131	0,14%	90,48%	B
4221	59	€	147.655	0,14%	90,61%	B
9372	24	€	147.356	0,14%	90,75%	B
7572	19	€	141.973	0,13%	90,88%	B
6499	26	€	138.488	0,13%	91,01%	B
269	55	€	131.953	0,12%	91,14%	B
15	46	€	129.845	0,12%	91,26%	B
4559	131	€	120.794	0,11%	91,37%	B
607	21	€	116.920	0,11%	91,48%	B
4571	8	€	115.235	0,11%	91,59%	B
4120	112	€	113.208	0,11%	91,69%	B
4553	138	€	111.824	0,10%	91,80%	B
8916	57	€	111.122	0,10%	91,90%	B
4459	44	€	110.032	0,10%	92,00%	B
503	66	€	106.079	0,10%	92,10%	B
11746	112	€	105.079	0,10%	92,20%	B
1425	11	€	104.615	0,10%	92,30%	B
423	110	€	104.557	0,10%	92,40%	B
1002	40	€	104.109	0,10%	92,49%	B
668	27	€	103.481	0,10%	92,59%	B

728	105	€	101.645	0,09%	92,68%	B
275	67	€	99.184	0,09%	92,78%	B
704	47	€	98.783	0,09%	92,87%	B
4201	292	€	98.517	0,09%	92,96%	B
280	43	€	98.477	0,09%	93,05%	B
11	70	€	95.508	0,09%	93,14%	B
40	21	€	94.712	0,09%	93,23%	B
4647	69	€	93.294	0,09%	93,32%	B
1038	27	€	93.208	0,09%	93,40%	B
507	75	€	92.286	0,09%	93,49%	B
4007	269	€	91.351	0,09%	93,58%	B
4634	34	€	90.803	0,08%	93,66%	B
253	45	€	89.080	0,08%	93,74%	B
501	16	€	85.752	0,08%	93,82%	B
623	88	€	85.548	0,08%	93,90%	B
4552	20	€	84.743	0,08%	93,98%	B
161	10	€	84.682	0,08%	94,06%	B
4175	86	€	83.761	0,08%	94,14%	B
278	66	€	79.853	0,07%	94,21%	B
1442	44	€	77.008	0,07%	94,29%	B
4438	24	€	75.265	0,07%	94,36%	B
60	50	€	74.875	0,07%	94,43%	B
4684	79	€	74.797	0,07%	94,50%	B
239	48	€	74.195	0,07%	94,57%	B
8	18	€	73.871	0,07%	94,63%	B
509	118	€	73.650	0,07%	94,70%	B
650	47	€	73.339	0,07%	94,77%	B
720	66	€	73.282	0,07%	94,84%	B
4355	84	€	72.635	0,07%	94,91%	B
4125	106	€	71.309	0,07%	94,97%	B

Appendix XVI. ABC-Analysis Suppliers

Creditor	Invoice	Sum Costs	%Costs	%Cum	ABC
1361	60	€ -5.981.282	7,36%	7,36%	A
1464	13	€ -3.818.262	4,70%	12,06%	A
2489	977	€ -3.136.029	3,86%	15,92%	A
492	392	€ -2.798.449	3,44%	19,37%	A
1365	21	€ -1.744.543	2,15%	21,51%	A
2458	393	€ -1.680.979	2,07%	23,58%	A
2061	481	€ -1.592.614	1,96%	25,54%	A
6174	112	€ -1.408.594	1,73%	27,28%	A
1218	10	€ -1.190.318	1,47%	28,74%	A
4041	9	€ -1.188.223	1,46%	30,20%	A
1789	31	€ -1.073.629	1,32%	31,52%	A
4034	1096	€ -1.053.523	1,30%	32,82%	A
2075	24	€ -964.723	1,19%	34,01%	A
1442	56	€ -898.571	1,11%	35,11%	A
1641	168	€ -881.006	1,08%	36,20%	A
2233	313	€ -878.627	1,08%	37,28%	A
4069	129	€ -868.576	1,07%	38,35%	A
8696	5	€ -848.622	1,04%	39,39%	A
4058	115	€ -840.473	1,03%	40,43%	A
1503	162	€ -821.608	1,01%	41,44%	A
468	119	€ -797.126	0,98%	42,42%	A
215	25	€ -685.175	0,84%	43,26%	A
220	192	€ -680.998	0,84%	44,10%	A
4430	375	€ -673.400	0,83%	44,93%	A
4244	26	€ -621.002	0,76%	45,69%	A
4036	723	€ -618.315	0,76%	46,46%	A
4060	57	€ -546.584	0,67%	47,13%	A
401	661	€ -522.800	0,64%	47,77%	A
1959	65	€ -519.119	0,64%	48,41%	A
375	257	€ -505.483	0,62%	49,03%	A
8520	62	€ -504.795	0,62%	49,65%	A
4115	54	€ -498.808	0,61%	50,27%	A
4097	55	€ -490.455	0,60%	50,87%	A
4423	141	€ -475.598	0,59%	51,46%	A
4103	33	€ -473.135	0,58%	52,04%	A
1948	601	€ -458.853	0,56%	52,60%	A
4179	573	€ -445.596	0,55%	53,15%	A
2025	216	€ -444.222	0,55%	53,70%	A
1606	85	€ -440.061	0,54%	54,24%	A
366	93	€ -437.755	0,54%	54,78%	A
163	197	€ -436.607	0,54%	55,32%	A
116	91	€ -436.579	0,54%	55,85%	A
595	518	€ -433.750	0,53%	56,39%	A
23	154	€ -433.259	0,53%	56,92%	A
287	569	€ -430.979	0,53%	57,45%	A
4022	32	€ -425.177	0,52%	57,98%	A
1720	45	€ -413.362	0,51%	58,48%	A
273	13	€ -407.045	0,50%	58,99%	A
4188	788	€ -386.648	0,48%	59,46%	A
212	14	€ -385.606	0,47%	59,94%	A
4325	65	€ -374.205	0,46%	60,40%	A

2097	5	€	-369.609	0,45%	60,85%	A
2098	5	€	-369.609	0,45%	61,31%	A
396	45	€	-364.055	0,45%	61,75%	A
4230	162	€	-351.809	0,43%	62,19%	A
4485	187	€	-342.953	0,42%	62,61%	A
624	105	€	-326.593	0,40%	63,01%	A
4012	49	€	-323.950	0,40%	63,41%	A
313	43	€	-323.797	0,40%	63,81%	A
2199	59	€	-323.636	0,40%	64,21%	A
4016	132	€	-318.946	0,39%	64,60%	A
2295	41	€	-317.217	0,39%	64,99%	A
4398	427	€	-313.975	0,39%	65,38%	A
2112	34	€	-308.698	0,38%	65,76%	A
194	47	€	-295.968	0,36%	66,12%	A
9006	21	€	-295.350	0,36%	66,48%	A
2096	62	€	-282.224	0,35%	66,83%	A
1622	104	€	-277.112	0,34%	67,17%	A
306	12	€	-272.454	0,34%	67,51%	A
63	24	€	-271.495	0,33%	67,84%	A
518	57	€	-270.620	0,33%	68,17%	A
4061	28	€	-267.638	0,33%	68,50%	A
455	56	€	-266.722	0,33%	68,83%	A
1767	74	€	-263.122	0,32%	69,16%	A
4059	30	€	-254.555	0,31%	69,47%	A
4030	93	€	-242.334	0,30%	69,77%	A
2238	101	€	-226.278	0,28%	70,05%	A
367	66	€	-224.384	0,28%	70,32%	A
869	12	€	-221.675	0,27%	70,60%	A
6293	20	€	-221.417	0,27%	70,87%	A
2434	29	€	-220.966	0,27%	71,14%	A
4256	51	€	-219.342	0,27%	71,41%	A
2500	8	€	-217.824	0,27%	71,68%	A
4269	24	€	-214.379	0,26%	71,94%	A
13289	25	€	-211.841	0,26%	72,20%	A
1410	346	€	-211.308	0,26%	72,46%	A
2454	56	€	-210.978	0,26%	72,72%	A
4322	81	€	-207.730	0,26%	72,98%	A
4441	29	€	-205.718	0,25%	73,23%	A
2405	34	€	-201.187	0,25%	73,48%	A
4557	45	€	-194.622	0,24%	73,72%	A
8539	31	€	-193.783	0,24%	73,96%	A
1388	72	€	-188.626	0,23%	74,19%	A
1147	71	€	-184.112	0,23%	74,42%	A
718	107	€	-181.971	0,22%	74,64%	A
2113	6	€	-181.652	0,22%	74,86%	A
8954	19	€	-177.188	0,22%	75,08%	A
394	86	€	-175.115	0,22%	75,30%	A
8801	19	€	-173.838	0,21%	75,51%	A
2508	5	€	-173.704	0,21%	75,72%	A
580	43	€	-171.380	0,21%	75,94%	A
1052	52	€	-169.285	0,21%	76,14%	A
4117	115	€	-166.797	0,21%	76,35%	A
4143	398	€	-165.753	0,20%	76,55%	A
8881	18	€	-162.876	0,20%	76,75%	A
2277	24	€	-160.406	0,20%	76,95%	A

4162	85	€	-159.227	0,20%	77,15%	A
11558	65	€	-159.138	0,20%	77,34%	A
2517	79	€	-155.024	0,19%	77,53%	A
4130	132	€	-154.326	0,19%	77,72%	A
2631	1	€	-153.577	0,19%	77,91%	A
377	60	€	-153.492	0,19%	78,10%	A
4412	57	€	-151.163	0,19%	78,29%	A
4276	154	€	-150.750	0,19%	78,47%	A
4270	58	€	-148.759	0,18%	78,66%	A
708	42	€	-147.714	0,18%	78,84%	A
4045	40	€	-145.519	0,18%	79,02%	A
4623	41	€	-143.760	0,18%	79,19%	A
4081	11	€	-140.521	0,17%	79,37%	A
2447	10	€	-139.578	0,17%	79,54%	A
7466	20	€	-138.830	0,17%	79,71%	A
2305	48	€	-138.807	0,17%	79,88%	A
2184	12	€	-138.642	0,17%	80,05%	B
1682	12	€	-135.864	0,17%	80,22%	B
1075	52	€	-133.130	0,16%	80,38%	B
484	112	€	-132.845	0,16%	80,55%	B
547	83	€	-132.115	0,16%	80,71%	B
4206	50	€	-131.938	0,16%	80,87%	B
148	11	€	-131.559	0,16%	81,03%	B
84	32	€	-131.448	0,16%	81,19%	B
2492	11	€	-129.180	0,16%	81,35%	B
912330	11	€	-128.572	0,16%	81,51%	B
2420	40	€	-127.359	0,16%	81,67%	B
4320	131	€	-126.849	0,16%	81,82%	B
210	11	€	-126.725	0,16%	81,98%	B
4101	19	€	-126.669	0,16%	82,14%	B
2236	55	€	-126.228	0,16%	82,29%	B
655	74	€	-124.620	0,15%	82,45%	B
358	11	€	-124.296	0,15%	82,60%	B
995	26	€	-123.837	0,15%	82,75%	B
2205	14	€	-123.543	0,15%	82,90%	B
4295	42	€	-120.626	0,15%	83,05%	B
465	90	€	-119.778	0,15%	83,20%	B
337	12	€	-118.080	0,15%	83,34%	B
1153	36	€	-117.953	0,15%	83,49%	B
9934	19	€	-116.348	0,14%	83,63%	B
2469	22	€	-115.095	0,14%	83,77%	B
705	10	€	-114.265	0,14%	83,91%	B
1362	52	€	-112.073	0,14%	84,05%	B
1753	51	€	-111.841	0,14%	84,19%	B
102	11	€	-111.776	0,14%	84,33%	B
4501	70	€	-111.412	0,14%	84,46%	B
4331	27	€	-111.400	0,14%	84,60%	B
9007	46	€	-109.559	0,13%	84,74%	B
2445	148	€	-109.181	0,13%	84,87%	B
4380	81	€	-108.840	0,13%	85,01%	B
2580	5	€	-108.591	0,13%	85,14%	B
2304	47	€	-108.049	0,13%	85,27%	B
1956	286	€	-106.850	0,13%	85,40%	B
2084	23	€	-101.794	0,13%	85,53%	B
4028	34	€	-100.325	0,12%	85,65%	B

4086	43	€	-99.909	0,12%	85,77%	B
4280	103	€	-97.068	0,12%	85,89%	B
211	11	€	-96.165	0,12%	86,01%	B
4435	255	€	-95.225	0,12%	86,13%	B
12330	9	€	-94.480	0,12%	86,25%	B
12643	26	€	-92.806	0,11%	86,36%	B
802	152	€	-92.622	0,11%	86,47%	B
652	27	€	-92.524	0,11%	86,59%	B
4449	50	€	-91.042	0,11%	86,70%	B
2256	59	€	-90.261	0,11%	86,81%	B
4415	156	€	-85.889	0,11%	86,92%	B
4328	60	€	-85.792	0,11%	87,02%	B
1868	45	€	-84.809	0,10%	87,13%	B
4438	61	€	-84.553	0,10%	87,23%	B
2058	41	€	-83.055	0,10%	87,33%	B
2237	41	€	-80.806	0,10%	87,43%	B
4160	76	€	-80.419	0,10%	87,53%	B
1590	30	€	-80.085	0,10%	87,63%	B
578	38	€	-78.598	0,10%	87,73%	B
4046	55	€	-77.863	0,10%	87,82%	B
13592	73	€	-76.955	0,09%	87,92%	B
4137	75	€	-76.465	0,09%	88,01%	B
1552	42	€	-76.030	0,09%	88,11%	B
175	11	€	-76.011	0,09%	88,20%	B
4055	14	€	-74.823	0,09%	88,29%	B
1857	118	€	-73.775	0,09%	88,38%	B
1943	85	€	-73.574	0,09%	88,47%	B
4075	16	€	-71.608	0,09%	88,56%	B
586	83	€	-70.985	0,09%	88,65%	B
1597	48	€	-70.576	0,09%	88,73%	B
1290	4	€	-70.531	0,09%	88,82%	B
391	69	€	-69.642	0,09%	88,91%	B
1349	40	€	-69.550	0,09%	88,99%	B
2352	14	€	-69.545	0,09%	89,08%	B
1937	30	€	-66.508	0,08%	89,16%	B
4329	117	€	-66.443	0,08%	89,24%	B
709	162	€	-66.046	0,08%	89,32%	B
571	10	€	-65.577	0,08%	89,40%	B
2370	35	€	-65.159	0,08%	89,48%	B
1985	4	€	-64.197	0,08%	89,56%	B
4297	97	€	-63.833	0,08%	89,64%	B
4567	26	€	-63.410	0,08%	89,72%	B
4247	40	€	-62.981	0,08%	89,80%	B
2366	8	€	-61.980	0,08%	89,87%	B
1344	5	€	-61.562	0,08%	89,95%	B
4338	73	€	-60.870	0,07%	90,02%	B
4365	111	€	-60.536	0,07%	90,10%	B
2582	9	€	-60.487	0,07%	90,17%	B
4440	66	€	-60.355	0,07%	90,25%	B
1246	56	€	-59.998	0,07%	90,32%	B
800	82	€	-57.667	0,07%	90,39%	B
2121	25	€	-57.354	0,07%	90,46%	B
669	12	€	-57.111	0,07%	90,53%	B
2223	2	€	-56.870	0,07%	90,60%	B
4092	4	€	-56.827	0,07%	90,67%	B

182	29 €	-56.725	0,07%	90,74%	B
4165	43 €	-56.311	0,07%	90,81%	B
32	48 €	-55.865	0,07%	90,88%	B
12276	22 €	-55.433	0,07%	90,95%	B
13700	18 €	-55.388	0,07%	91,02%	B
108	15 €	-54.921	0,07%	91,09%	B
12946	31 €	-54.652	0,07%	91,15%	B
1204	46 €	-54.550	0,07%	91,22%	B
4555	16 €	-54.311	0,07%	91,29%	B
1135	50 €	-54.073	0,07%	91,35%	B
2546	7 €	-53.147	0,07%	91,42%	B
1880	2 €	-53.024	0,07%	91,48%	B
756	14 €	-52.448	0,06%	91,55%	B
4388	39 €	-52.195	0,06%	91,61%	B
4187	416 €	-52.092	0,06%	91,68%	B
564	12 €	-51.011	0,06%	91,74%	B
2198	43 €	-50.406	0,06%	91,80%	B
4020	281 €	-50.372	0,06%	91,86%	B
2553	16 €	-49.938	0,06%	91,92%	B
2526	28 €	-49.826	0,06%	91,99%	B
4178	350 €	-48.579	0,06%	92,05%	B
2560	19 €	-48.292	0,06%	92,11%	B
4014	28 €	-47.680	0,06%	92,16%	B
2154	5 €	-47.565	0,06%	92,22%	B
692	24 €	-47.207	0,06%	92,28%	B
328	109 €	-46.985	0,06%	92,34%	B
2514	48 €	-46.761	0,06%	92,40%	B
2294	37 €	-45.713	0,06%	92,45%	B
2513	6 €	-45.281	0,06%	92,51%	B
4414	23 €	-44.807	0,06%	92,56%	B
2598	21 €	-44.610	0,05%	92,62%	B
2116	45 €	-44.361	0,05%	92,67%	B
1796	55 €	-44.112	0,05%	92,73%	B
4136	21 €	-43.940	0,05%	92,78%	B
2185	48 €	-43.412	0,05%	92,83%	B
13436	7 €	-43.035	0,05%	92,89%	B
653	17 €	-42.910	0,05%	92,94%	B
1568	24 €	-42.905	0,05%	92,99%	B
2293	7 €	-42.817	0,05%	93,05%	B
2519	10 €	-41.637	0,05%	93,10%	B
4366	55 €	-41.251	0,05%	93,15%	B
4189	88 €	-41.128	0,05%	93,20%	B
2531	4 €	-40.613	0,05%	93,25%	B
1912	69 €	-40.295	0,05%	93,30%	B
388	2 €	-39.206	0,05%	93,35%	B
1651	3 €	-38.625	0,05%	93,39%	B
4242	94 €	-38.558	0,05%	93,44%	B
1143	12 €	-38.490	0,05%	93,49%	B
4113	22 €	-38.153	0,05%	93,54%	B
4182	19 €	-37.875	0,05%	93,58%	B
2461	13 €	-37.863	0,05%	93,63%	B
2400	6 €	-37.587	0,05%	93,68%	B
2536	15 €	-36.732	0,05%	93,72%	B
1060	1 €	-36.423	0,04%	93,77%	B
2524	8 €	-36.310	0,04%	93,81%	B

2555	2	€	-35.070	0,04%	93,85%	B
263	75	€	-34.046	0,04%	93,89%	B
4225	124	€	-34.014	0,04%	93,94%	B
2635	3	€	-33.838	0,04%	93,98%	B
1473	20	€	-33.712	0,04%	94,02%	B
733	14	€	-33.607	0,04%	94,06%	B
4621	2	€	-33.541	0,04%	94,10%	B
527	26	€	-33.284	0,04%	94,14%	B
1634	20	€	-33.045	0,04%	94,18%	B
4210	39	€	-33.018	0,04%	94,22%	B
4361	134	€	-32.962	0,04%	94,27%	B
192	3	€	-32.811	0,04%	94,31%	B
156	20	€	-32.523	0,04%	94,35%	B
4451	48	€	-32.499	0,04%	94,39%	B
4287	251	€	-31.972	0,04%	94,43%	B
4006	53	€	-31.756	0,04%	94,46%	B
1578	9	€	-31.050	0,04%	94,50%	B
2433	44	€	-30.802	0,04%	94,54%	B
4208	60	€	-30.703	0,04%	94,58%	B
713	11	€	-30.228	0,04%	94,62%	B
698	9	€	-30.003	0,04%	94,65%	B
1385	18	€	-29.941	0,04%	94,69%	B
4161	41	€	-29.634	0,04%	94,73%	B
4131	111	€	-28.465	0,04%	94,76%	B
1477	7	€	-28.127	0,03%	94,80%	B
2479	15	€	-28.013	0,03%	94,83%	B
723	7	€	-27.934	0,03%	94,86%	B
2504	12	€	-27.856	0,03%	94,90%	B
2617	2	€	-27.830	0,03%	94,93%	B
2101	7	€	-27.819	0,03%	94,97%	B

Appendix XVII. Dynamic Discounting - Financing Costs

DSO	Nedcargo New Costs	Nedcargo Benefit	Customer Benefit	Total Benefit
0	€ -	€ 161.143	€ -75.200	€ 85.943
1	€ 4.402	€ 156.741	€ -73.146	€ 83.595
2	€ 8.804	€ 152.339	€ -71.092	€ 81.248
3	€ 13.206	€ 147.937	€ -69.037	€ 78.900
4	€ 17.609	€ 143.535	€ -66.983	€ 76.552
5	€ 22.011	€ 139.133	€ -64.929	€ 74.204
6	€ 26.413	€ 134.730	€ -62.874	€ 71.856
7	€ 30.815	€ 130.328	€ -60.820	€ 69.508
8	€ 35.217	€ 125.926	€ -58.766	€ 67.161
9	€ 39.619	€ 121.524	€ -56.711	€ 64.813
10	€ 44.022	€ 117.122	€ -54.657	€ 62.465
11	€ 48.424	€ 112.720	€ -52.602	€ 60.117
12	€ 52.826	€ 108.317	€ -50.548	€ 57.769
13	€ 57.228	€ 103.915	€ -48.494	€ 55.421
14	€ 61.630	€ 99.513	€ -46.439	€ 53.074
15	€ 66.032	€ 95.111	€ -44.385	€ 50.726
16	€ 70.435	€ 90.709	€ -42.331	€ 48.378
17	€ 74.837	€ 86.307	€ -40.276	€ 46.030
18	€ 79.239	€ 81.904	€ -38.222	€ 43.682
19	€ 83.641	€ 77.502	€ -36.168	€ 41.335
20	€ 88.043	€ 73.100	€ -34.113	€ 38.987
21	€ 92.445	€ 68.698	€ -32.059	€ 36.639
22	€ 96.848	€ 64.296	€ -30.005	€ 34.291
23	€ 101.250	€ 59.894	€ -27.950	€ 31.943
24	€ 105.652	€ 55.491	€ -25.896	€ 29.595
25	€ 110.054	€ 51.089	€ -23.842	€ 27.248
26	€ 114.456	€ 46.687	€ -21.787	€ 24.900
27	€ 118.858	€ 42.285	€ -19.733	€ 22.552
28	€ 123.261	€ 37.883	€ -17.679	€ 20.204
29	€ 127.663	€ 33.481	€ -15.624	€ 17.856
30	€ 132.065	€ 29.078	€ -13.570	€ 15.509
31	€ 136.467	€ 24.676	€ -11.516	€ 13.161
32	€ 140.869	€ 20.274	€ -9.461	€ 10.813
33	€ 145.271	€ 15.872	€ -7.407	€ 8.465
34	€ 149.674	€ 11.470	€ -5.353	€ 6.117
35	€ 154.076	€ 7.068	€ -3.298	€ 3.769
36	€ 158.478	€ 2.666	€ -1.244	€ 1.422
37	€ 162.880	€ -1.737	€ 810	€ -926
38	€ 167.282	€ -6.139	€ 2.865	€ -3.274
39	€ 171.684	€ -10.541	€ 4.919	€ -5.622
40	€ 176.087	€ -14.943	€ 6.973	€ -7.970
41	€ 180.489	€ -19.345	€ 9.028	€ -10.318
42	€ 184.891	€ -23.747	€ 11.082	€ -12.665
43	€ 189.293	€ -28.150	€ 13.137	€ -15.013
44	€ 193.695	€ -32.552	€ 15.191	€ -17.361

45	€	198.097	€	-36.954	€	17.245	€	-19.709
46	€	202.500	€	-41.356	€	19.300	€	-22.057
47	€	206.902	€	-45.758	€	21.354	€	-24.404
48	€	211.304	€	-50.160	€	23.408	€	-26.752
49	€	215.706	€	-54.563	€	25.463	€	-29.100
50	€	220.108	€	-58.965	€	27.517	€	-31.448
51	€	224.510	€	-63.367	€	29.571	€	-33.796
52	€	228.913	€	-67.769	€	31.626	€	-36.144
53	€	233.315	€	-72.171	€	33.680	€	-38.491
54	€	237.717	€	-76.573	€	35.734	€	-40.839
55	€	242.119	€	-80.976	€	37.789	€	-43.187
56	€	246.521	€	-85.378	€	39.843	€	-45.535
57	€	250.923	€	-89.780	€	41.897	€	-47.883
58	€	255.326	€	-94.182	€	43.952	€	-50.230
59	€	259.728	€	-98.584	€	46.006	€	-52.578
60	€	264.130	€	-102.986	€	48.060	€	-54.926
61	€	268.532	€	-107.389	€	50.115	€	-57.274
62	€	272.934	€	-111.791	€	52.169	€	-59.622
63	€	277.336	€	-116.193	€	54.223	€	-61.970
64	€	281.739	€	-120.595	€	56.278	€	-64.317
65	€	286.141	€	-124.997	€	58.332	€	-66.665
66	€	290.543	€	-129.399	€	60.386	€	-69.013
67	€	294.945	€	-133.802	€	62.441	€	-71.361
68	€	299.347	€	-138.204	€	64.495	€	-73.709
69	€	303.749	€	-142.606	€	66.549	€	-76.056
70	€	308.151	€	-147.008	€	68.604	€	-78.404
71	€	312.554	€	-151.410	€	70.658	€	-80.752
72	€	316.956	€	-155.812	€	72.712	€	-83.100
73	€	321.358	€	-160.215	€	74.767	€	-85.448
74	€	325.760	€	-164.617	€	76.821	€	-87.796
75	€	330.162	€	-169.019	€	78.875	€	-90.143
76	€	334.564	€	-173.421	€	80.930	€	-92.491
77	€	338.967	€	-177.823	€	82.984	€	-94.839
78	€	343.369	€	-182.225	€	85.039	€	-97.187
79	€	347.771	€	-186.628	€	87.093	€	-99.535
80	€	352.173	€	-191.030	€	89.147	€	-101.883
81	€	356.575	€	-195.432	€	91.202	€	-104.230
82	€	360.977	€	-199.834	€	93.256	€	-106.578
83	€	365.380	€	-204.236	€	95.310	€	-108.926
84	€	369.782	€	-208.638	€	97.365	€	-111.274
85	€	374.184	€	-213.041	€	99.419	€	-113.622
86	€	378.586	€	-217.443	€	101.473	€	-115.969
87	€	382.988	€	-221.845	€	103.528	€	-118.317
88	€	387.390	€	-226.247	€	105.582	€	-120.665
89	€	391.793	€	-230.649	€	107.636	€	-123.013
90	€	396.195	€	-235.051	€	109.691	€	-125.361

Appendix XVIII. Dynamic Discounting - Annual Discount/Fee

	Requested Discount/Fee On Annual Basis														
Paid After X Days	0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%	5,5%	6,0%	6,5%	7,0%	7,5%
0	€ 53.714	€ 107.429	€ 161.143	€ 214.858	€ 268.572	€ 322.287	€ 376.001	€ 429.716	€ 483.430	€ 537.145	€ 590.859	€ 644.574	€ 698.288	€ 752.003	€ 805.717
1	€ 52.247	€ 104.494	€ 156.741	€ 208.988	€ 261.235	€ 313.483	€ 365.730	€ 417.977	€ 470.224	€ 522.471	€ 574.718	€ 626.965	€ 679.212	€ 731.459	€ 783.706
2	€ 50.780	€ 101.559	€ 152.339	€ 203.119	€ 253.898	€ 304.678	€ 355.458	€ 406.238	€ 457.017	€ 507.797	€ 558.577	€ 609.356	€ 660.136	€ 710.916	€ 761.695
3	€ 49.312	€ 98.625	€ 147.937	€ 197.249	€ 246.562	€ 295.874	€ 345.186	€ 394.498	€ 443.811	€ 493.123	€ 542.435	€ 591.748	€ 641.060	€ 690.372	€ 739.685
4	€ 47.845	€ 95.690	€ 143.535	€ 191.380	€ 239.225	€ 287.070	€ 334.914	€ 382.759	€ 430.604	€ 478.449	€ 526.294	€ 574.139	€ 621.984	€ 669.829	€ 717.674
5	€ 46.378	€ 92.755	€ 139.133	€ 185.510	€ 231.888	€ 278.265	€ 324.643	€ 371.020	€ 417.398	€ 463.775	€ 510.153	€ 556.530	€ 602.908	€ 649.285	€ 695.663
6	€ 44.910	€ 89.820	€ 134.730	€ 179.641	€ 224.551	€ 269.461	€ 314.371	€ 359.281	€ 404.191	€ 449.101	€ 494.012	€ 538.922	€ 583.832	€ 628.742	€ 673.652
7	€ 43.443	€ 86.886	€ 130.328	€ 173.771	€ 217.214	€ 260.657	€ 304.099	€ 347.542	€ 390.985	€ 434.428	€ 477.870	€ 521.313	€ 564.756	€ 608.199	€ 651.641
8	€ 41.975	€ 83.951	€ 125.926	€ 167.901	€ 209.877	€ 251.852	€ 293.828	€ 335.803	€ 377.778	€ 419.754	€ 461.729	€ 503.704	€ 545.680	€ 587.655	€ 629.631
9	€ 40.508	€ 81.016	€ 121.524	€ 162.032	€ 202.540	€ 243.048	€ 283.556	€ 324.064	€ 364.572	€ 405.080	€ 445.588	€ 486.096	€ 526.604	€ 567.112	€ 607.620
10	€ 39.041	€ 78.081	€ 117.122	€ 156.162	€ 195.203	€ 234.244	€ 273.284	€ 312.325	€ 351.365	€ 390.406	€ 429.447	€ 468.487	€ 507.528	€ 546.568	€ 585.609
11	€ 37.573	€ 75.146	€ 112.720	€ 150.293	€ 187.866	€ 225.439	€ 263.012	€ 300.586	€ 338.159	€ 375.732	€ 413.305	€ 450.878	€ 488.452	€ 526.025	€ 563.598
12	€ 36.106	€ 72.212	€ 108.317	€ 144.423	€ 180.529	€ 216.635	€ 252.741	€ 288.847	€ 324.952	€ 361.058	€ 397.164	€ 433.270	€ 469.376	€ 505.481	€ 541.587
13	€ 34.638	€ 69.277	€ 103.915	€ 138.554	€ 173.192	€ 207.831	€ 242.469	€ 277.107	€ 311.746	€ 346.384	€ 381.023	€ 415.661	€ 450.300	€ 484.938	€ 519.576
14	€ 33.171	€ 66.342	€ 99.513	€ 132.684	€ 165.855	€ 199.026	€ 232.197	€ 265.368	€ 298.539	€ 331.710	€ 364.881	€ 398.052	€ 431.224	€ 464.395	€ 497.566
15	€ 31.704	€ 63.407	€ 95.111	€ 126.815	€ 158.518	€ 190.222	€ 221.926	€ 253.629	€ 285.333	€ 317.037	€ 348.740	€ 380.444	€ 412.147	€ 443.851	€ 475.555
16	€ 30.236	€ 60.473	€ 90.709	€ 120.945	€ 151.181	€ 181.418	€ 211.654	€ 241.890	€ 272.126	€ 302.363	€ 332.599	€ 362.835	€ 393.071	€ 423.308	€ 453.544
17	€ 28.769	€ 57.538	€ 86.307	€ 115.076	€ 143.844	€ 172.613	€ 201.382	€ 230.151	€ 258.920	€ 287.689	€ 316.458	€ 345.227	€ 373.995	€ 402.764	€ 431.533
18	€ 27.301	€ 54.603	€ 81.904	€ 109.206	€ 136.507	€ 163.809	€ 191.110	€ 218.412	€ 245.713	€ 273.015	€ 300.316	€ 327.618	€ 354.919	€ 382.221	€ 409.522
19	€ 25.834	€ 51.668	€ 77.502	€ 103.336	€ 129.170	€ 155.005	€ 180.839	€ 206.673	€ 232.507	€ 258.341	€ 284.175	€ 310.009	€ 335.843	€ 361.677	€ 387.511
20	€ 24.367	€ 48.733	€ 73.100	€ 97.467	€ 121.834	€ 146.200	€ 170.567	€ 194.934	€ 219.300	€ 243.667	€ 268.034	€ 292.401	€ 316.767	€ 341.134	€ 365.501
21	€ 22.899	€ 45.799	€ 68.698	€ 91.597	€ 114.497	€ 137.396	€ 160.295	€ 183.195	€ 206.094	€ 228.993	€ 251.893	€ 274.792	€ 297.691	€ 320.591	€ 343.490
22	€ 21.432	€ 42.864	€ 64.296	€ 85.728	€ 107.160	€ 128.592	€ 150.024	€ 171.455	€ 192.887	€ 214.319	€ 235.751	€ 257.183	€ 278.615	€ 300.047	€ 321.479
23	€ 19.965	€ 39.929	€ 59.894	€ 79.858	€ 99.823	€ 119.787	€ 139.752	€ 159.716	€ 179.681	€ 199.645	€ 219.610	€ 239.575	€ 259.539	€ 279.504	€ 299.468
24	€ 18.497	€ 36.994	€ 55.491	€ 73.989	€ 92.486	€ 110.983	€ 129.480	€ 147.977	€ 166.474	€ 184.972	€ 203.469	€ 221.966	€ 240.463	€ 258.960	€ 277.457
25	€ 17.030	€ 34.060	€ 51.089	€ 68.119	€ 85.149	€ 102.179	€ 119.208	€ 136.238	€ 153.268	€ 170.298	€ 187.327	€ 204.357	€ 221.387	€ 238.417	€ 255.447
26	€ 15.562	€ 31.125	€ 46.687	€ 62.250	€ 77.812	€ 93.374	€ 108.937	€ 124.499	€ 140.061	€ 155.624	€ 171.186	€ 186.749	€ 202.311	€ 217.873	€ 233.436
27	€ 14.095	€ 28.190	€ 42.285	€ 56.380	€ 70.475	€ 84.570	€ 98.665	€ 112.760	€ 126.855	€ 140.950	€ 155.045	€ 169.140	€ 183.235	€ 197.330	€ 211.425
28	€ 12.628	€ 25.255	€ 37.883	€ 50.510	€ 63.138	€ 75.766	€ 88.393	€ 101.021	€ 113.648	€ 126.276	€ 138.904	€ 151.531	€ 164.159	€ 176.786	€ 189.414
29	€ 11.160	€ 22.320	€ 33.481	€ 44.641	€ 55.801	€ 66.961	€ 78.122	€ 89.282	€ 100.442	€ 111.602	€ 122.762	€ 133.923	€ 145.083	€ 156.243	€ 167.403
30	€ 9.693	€ 19.386	€ 29.078	€ 38.771	€ 48.464	€ 58.157	€ 67.850	€ 77.543	€ 87.235	€ 96.928	€ 106.621	€ 116.314	€ 126.007	€ 135.700	€ 145.392

Appendix XIX. Dynamic Discounting - Nedcargo Benefit

	Requested Discount/Fee On Annual Basis															
Paid After X Days	0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%	5,5%	6,0%	6,5%	7,0%	7,5%
0	€ 107.429	€ 53.714	€ -	€ -53.714	€ -107.429	€ -161.143	€ -214.858	€ -268.572	€ -322.287	€ -376.001	€ -429.716	€ -483.430	€ -537.145	€ -590.859	€ -644.574
1	€ 104.494	€ 52.247	€ -	€ -52.247	€ -104.494	€ -156.741	€ -208.988	€ -261.235	€ -313.483	€ -365.730	€ -417.977	€ -470.224	€ -522.471	€ -574.718	€ -626.965
2	€ 101.559	€ 50.780	€ -	€ -50.780	€ -101.559	€ -152.339	€ -203.119	€ -253.898	€ -304.678	€ -355.458	€ -406.238	€ -457.017	€ -507.797	€ -558.577	€ -609.356
3	€ 98.625	€ 49.312	€ -	€ -49.312	€ -98.625	€ -147.937	€ -197.249	€ -246.562	€ -295.874	€ -345.186	€ -394.498	€ -443.811	€ -493.123	€ -542.435	€ -591.748
4	€ 95.690	€ 47.845	€ -	€ -47.845	€ -95.690	€ -143.535	€ -191.380	€ -239.225	€ -287.070	€ -334.914	€ -382.759	€ -430.604	€ -478.449	€ -526.294	€ -574.139
5	€ 92.755	€ 46.378	€ -	€ -46.378	€ -92.755	€ -139.133	€ -185.510	€ -231.888	€ -278.265	€ -324.643	€ -371.020	€ -417.398	€ -463.775	€ -510.153	€ -556.530
6	€ 89.820	€ 44.910	€ -	€ -44.910	€ -89.820	€ -134.730	€ -179.641	€ -224.551	€ -269.461	€ -314.371	€ -359.281	€ -404.191	€ -449.101	€ -494.012	€ -538.922
7	€ 86.886	€ 43.443	€ -	€ -43.443	€ -86.886	€ -130.328	€ -173.771	€ -217.214	€ -260.657	€ -304.099	€ -347.542	€ -390.985	€ -434.428	€ -477.870	€ -521.313
8	€ 83.951	€ 41.975	€ -	€ -41.975	€ -83.951	€ -125.926	€ -167.901	€ -209.877	€ -251.852	€ -293.828	€ -335.803	€ -377.778	€ -419.754	€ -461.729	€ -503.704
9	€ 81.016	€ 40.508	€ -	€ -40.508	€ -81.016	€ -121.524	€ -162.032	€ -202.540	€ -243.048	€ -283.556	€ -324.064	€ -364.572	€ -405.080	€ -445.588	€ -486.096
10	€ 78.081	€ 39.041	€ -	€ -39.041	€ -78.081	€ -117.122	€ -156.162	€ -195.203	€ -234.244	€ -273.284	€ -312.325	€ -351.365	€ -390.406	€ -429.447	€ -468.487
11	€ 75.146	€ 37.573	€ -	€ -37.573	€ -75.146	€ -112.720	€ -150.293	€ -187.866	€ -225.439	€ -263.012	€ -300.586	€ -338.159	€ -375.732	€ -413.305	€ -450.878
12	€ 72.212	€ 36.106	€ -	€ -36.106	€ -72.212	€ -108.317	€ -144.423	€ -180.529	€ -216.635	€ -252.741	€ -288.847	€ -324.952	€ -361.058	€ -397.164	€ -433.270
13	€ 69.277	€ 34.638	€ -	€ -34.638	€ -69.277	€ -103.915	€ -138.554	€ -173.192	€ -207.831	€ -242.469	€ -277.107	€ -311.746	€ -346.384	€ -381.023	€ -415.661
14	€ 66.342	€ 33.171	€ -	€ -33.171	€ -66.342	€ -99.513	€ -132.684	€ -165.855	€ -199.026	€ -232.197	€ -265.368	€ -298.539	€ -331.710	€ -364.881	€ -398.052
15	€ 63.407	€ 31.704	€ -	€ -31.704	€ -63.407	€ -95.111	€ -126.815	€ -158.518	€ -190.222	€ -221.926	€ -253.629	€ -285.333	€ -317.037	€ -348.740	€ -380.444
16	€ 60.473	€ 30.236	€ -	€ -30.236	€ -60.473	€ -90.709	€ -120.945	€ -151.181	€ -181.418	€ -211.654	€ -241.890	€ -272.126	€ -302.363	€ -332.599	€ -362.835
17	€ 57.538	€ 28.769	€ -	€ -28.769	€ -57.538	€ -86.307	€ -115.076	€ -143.844	€ -172.613	€ -201.382	€ -230.151	€ -258.920	€ -287.689	€ -316.458	€ -345.227
18	€ 54.603	€ 27.301	€ -	€ -27.301	€ -54.603	€ -81.904	€ -109.206	€ -136.507	€ -163.809	€ -191.110	€ -218.412	€ -245.713	€ -273.015	€ -300.316	€ -327.618
19	€ 51.668	€ 25.834	€ -	€ -25.834	€ -51.668	€ -77.502	€ -103.336	€ -129.170	€ -155.005	€ -180.839	€ -206.673	€ -232.507	€ -258.341	€ -284.175	€ -310.009
20	€ 48.733	€ 24.367	€ -	€ -24.367	€ -48.733	€ -73.100	€ -97.467	€ -121.834	€ -146.200	€ -170.567	€ -194.934	€ -219.300	€ -243.667	€ -268.034	€ -292.401
21	€ 45.799	€ 22.899	€ -	€ -22.899	€ -45.799	€ -68.698	€ -91.597	€ -114.497	€ -137.396	€ -160.295	€ -183.195	€ -206.094	€ -228.993	€ -251.893	€ -274.792
22	€ 42.864	€ 21.432	€ -	€ -21.432	€ -42.864	€ -64.296	€ -85.728	€ -107.160	€ -128.592	€ -150.024	€ -171.455	€ -192.887	€ -214.319	€ -235.751	€ -257.183
23	€ 39.929	€ 19.965	€ -	€ -19.965	€ -39.929	€ -59.894	€ -79.858	€ -99.823	€ -119.787	€ -139.752	€ -159.716	€ -179.681	€ -199.645	€ -219.610	€ -239.575
24	€ 36.994	€ 18.497	€ -	€ -18.497	€ -36.994	€ -55.491	€ -73.989	€ -92.486	€ -110.983	€ -129.480	€ -147.977	€ -166.474	€ -184.972	€ -203.469	€ -221.966
25	€ 34.060	€ 17.030	€ -	€ -17.030	€ -34.060	€ -51.089	€ -68.119	€ -85.149	€ -102.179	€ -119.208	€ -136.238	€ -153.268	€ -170.298	€ -187.327	€ -204.357
26	€ 31.125	€ 15.562	€ -	€ -15.562	€ -31.125	€ -46.687	€ -62.250	€ -77.812	€ -93.374	€ -108.937	€ -124.499	€ -140.061	€ -155.624	€ -171.186	€ -186.749
27	€ 28.190	€ 14.095	€ -	€ -14.095	€ -28.190	€ -42.285	€ -56.380	€ -70.475	€ -84.570	€ -98.665	€ -112.760	€ -126.855	€ -140.950	€ -155.045	€ -169.140
28	€ 25.255	€ 12.628	€ -	€ -12.628	€ -25.255	€ -37.883	€ -50.510	€ -63.138	€ -75.766	€ -88.393	€ -101.021	€ -113.648	€ -126.276	€ -138.904	€ -151.531
29	€ 22.320	€ 11.160	€ -	€ -11.160	€ -22.320	€ -33.481	€ -44.641	€ -55.801	€ -66.961	€ -78.122	€ -89.282	€ -100.442	€ -111.602	€ -122.762	€ -133.923
30	€ 19.386	€ 9.693	€ -	€ -9.693	€ -19.386	€ -29.078	€ -38.771	€ -48.464	€ -58.157	€ -67.850	€ -77.543	€ -87.235	€ -96.928	€ -106.621	€ -116.314

Appendix XX. Dynamic Discounting - Customer Benefit

	Requested Discount/Fee On Annual Basis															
Paid After X Days	0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%	5,5%	6,0%	6,5%	7,0%	7,5%
0	€ -21.486	€ 32.229	€ 85.943	€ 139.658	€ 193.372	€ 247.087	€ 300.801	€ 354.516	€ 408.230	€ 461.944	€ 515.659	€ 569.373	€ 623.088	€ 676.802	€ 730.517
1	€ -20.899	€ 31.348	€ 83.595	€ 135.842	€ 188.090	€ 240.337	€ 292.584	€ 344.831	€ 397.078	€ 449.325	€ 501.572	€ 553.819	€ 606.066	€ 658.313	€ 710.560
2	€ -20.312	€ 30.468	€ 81.248	€ 132.027	€ 182.807	€ 233.587	€ 284.366	€ 335.146	€ 385.926	€ 436.705	€ 487.485	€ 538.265	€ 589.044	€ 639.824	€ 690.604
3	€ -19.725	€ 29.587	€ 78.900	€ 128.212	€ 177.524	€ 226.837	€ 276.149	€ 325.461	€ 374.774	€ 424.086	€ 473.398	€ 522.710	€ 572.023	€ 621.335	€ 670.647
4	€ -19.138	€ 28.707	€ 76.552	€ 124.397	€ 172.242	€ 220.087	€ 267.932	€ 315.776	€ 363.621	€ 411.466	€ 459.311	€ 507.156	€ 555.001	€ 602.846	€ 650.691
5	€ -18.551	€ 27.827	€ 74.204	€ 120.582	€ 166.959	€ 213.337	€ 259.714	€ 306.092	€ 352.469	€ 398.847	€ 445.224	€ 491.602	€ 537.979	€ 584.357	€ 630.734
6	€ -17.964	€ 26.946	€ 71.856	€ 116.766	€ 161.677	€ 206.587	€ 251.497	€ 296.407	€ 341.317	€ 386.227	€ 431.137	€ 476.048	€ 520.958	€ 565.868	€ 610.778
7	€ -17.377	€ 26.066	€ 69.508	€ 112.951	€ 156.394	€ 199.837	€ 243.279	€ 286.722	€ 330.165	€ 373.608	€ 417.050	€ 460.493	€ 503.936	€ 547.379	€ 590.821
8	€ -16.790	€ 25.185	€ 67.161	€ 109.136	€ 151.111	€ 193.087	€ 235.062	€ 277.037	€ 319.013	€ 360.988	€ 402.964	€ 444.939	€ 486.914	€ 528.890	€ 570.865
9	€ -16.203	€ 24.305	€ 64.813	€ 105.321	€ 145.829	€ 186.337	€ 226.845	€ 267.353	€ 307.861	€ 348.369	€ 388.877	€ 429.385	€ 469.893	€ 510.401	€ 550.909
10	€ -15.616	€ 23.424	€ 62.465	€ 101.506	€ 140.546	€ 179.587	€ 218.627	€ 257.668	€ 296.709	€ 335.749	€ 374.790	€ 413.830	€ 452.871	€ 491.911	€ 530.952
11	€ -15.029	€ 22.544	€ 60.117	€ 97.690	€ 135.264	€ 172.837	€ 210.410	€ 247.983	€ 285.556	€ 323.130	€ 360.703	€ 398.276	€ 435.849	€ 473.422	€ 510.996
12	€ -14.442	€ 21.663	€ 57.769	€ 93.875	€ 129.981	€ 166.087	€ 202.193	€ 238.298	€ 274.404	€ 310.510	€ 346.616	€ 382.722	€ 418.827	€ 454.933	€ 491.039
13	€ -13.855	€ 20.783	€ 55.421	€ 90.060	€ 124.698	€ 159.337	€ 193.975	€ 228.614	€ 263.252	€ 297.890	€ 332.529	€ 367.167	€ 401.806	€ 436.444	€ 471.083
14	€ -13.268	€ 19.903	€ 53.074	€ 86.245	€ 119.416	€ 152.587	€ 185.758	€ 218.929	€ 252.100	€ 285.271	€ 318.442	€ 351.613	€ 384.784	€ 417.955	€ 451.126
15	€ -12.681	€ 19.022	€ 50.726	€ 82.429	€ 114.133	€ 145.837	€ 177.540	€ 209.244	€ 240.948	€ 272.651	€ 304.355	€ 336.059	€ 367.762	€ 399.466	€ 431.170
16	€ -12.095	€ 18.142	€ 48.378	€ 78.614	€ 108.851	€ 139.087	€ 169.323	€ 199.559	€ 229.796	€ 260.032	€ 290.268	€ 320.504	€ 350.741	€ 380.977	€ 411.213
17	€ -11.508	€ 17.261	€ 46.030	€ 74.799	€ 103.568	€ 132.337	€ 161.106	€ 189.875	€ 218.643	€ 247.412	€ 276.181	€ 304.950	€ 333.719	€ 362.488	€ 391.257
18	€ -10.921	€ 16.381	€ 43.682	€ 70.984	€ 98.285	€ 125.587	€ 152.888	€ 180.190	€ 207.491	€ 234.793	€ 262.094	€ 289.396	€ 316.697	€ 343.999	€ 371.300
19	€ -10.334	€ 15.500	€ 41.335	€ 67.169	€ 93.003	€ 118.837	€ 144.671	€ 170.505	€ 196.339	€ 222.173	€ 248.007	€ 273.841	€ 299.676	€ 325.510	€ 351.344
20	€ -9.747	€ 14.620	€ 38.987	€ 63.353	€ 87.720	€ 112.087	€ 136.454	€ 160.820	€ 185.187	€ 209.554	€ 233.920	€ 258.287	€ 282.654	€ 307.021	€ 331.387
21	€ -9.160	€ 13.740	€ 36.639	€ 59.538	€ 82.438	€ 105.337	€ 128.236	€ 151.136	€ 174.035	€ 196.934	€ 219.834	€ 242.733	€ 265.632	€ 288.531	€ 311.431
22	€ -8.573	€ 12.859	€ 34.291	€ 55.723	€ 77.155	€ 98.587	€ 120.019	€ 141.451	€ 162.883	€ 184.315	€ 205.747	€ 227.179	€ 248.610	€ 270.042	€ 291.474
23	€ -7.986	€ 11.979	€ 31.943	€ 51.908	€ 71.872	€ 91.837	€ 111.801	€ 131.766	€ 151.731	€ 171.695	€ 191.660	€ 211.624	€ 231.589	€ 251.553	€ 271.518
24	€ -7.399	€ 11.098	€ 29.595	€ 48.093	€ 66.590	€ 85.087	€ 103.584	€ 122.081	€ 140.578	€ 159.076	€ 177.573	€ 196.070	€ 214.567	€ 233.064	€ 251.561
25	€ -6.812	€ 10.218	€ 27.248	€ 44.277	€ 61.307	€ 78.337	€ 95.367	€ 112.396	€ 129.426	€ 146.456	€ 163.486	€ 180.516	€ 197.545	€ 214.575	€ 231.605
26	€ -6.225	€ 9.337	€ 24.900	€ 40.462	€ 56.025	€ 71.587	€ 87.149	€ 102.712	€ 118.274	€ 133.836	€ 149.399	€ 164.961	€ 180.524	€ 196.086	€ 211.648
27	€ -5.638	€ 8.457	€ 22.552	€ 36.647	€ 50.742	€ 64.837	€ 78.932	€ 93.027	€ 107.122	€ 121.217	€ 135.312	€ 149.407	€ 163.502	€ 177.597	€ 191.692
28	€ -5.051	€ 7.577	€ 20.204	€ 32.832	€ 45.459	€ 58.087	€ 70.715	€ 83.342	€ 95.970	€ 108.597	€ 121.225	€ 133.853	€ 146.480	€ 159.108	€ 171.735
29	€ -4.464	€ 6.696	€ 17.856	€ 29.017	€ 40.177	€ 51.337	€ 62.497	€ 73.657	€ 84.818	€ 95.978	€ 107.138	€ 118.298	€ 129.459	€ 140.619	€ 151.779
30	€ -3.877	€ 5.816	€ 15.509	€ 25.201	€ 34.894	€ 44.587	€ 54.280	€ 63.973	€ 73.666	€ 83.358	€ 93.051	€ 102.744	€ 112.437	€ 122.130	€ 131.822

Appendix XXI. Dynamic Discounting – Total Benefit

	Requested Discount On Annual Basis														
Paid After X Days	0,5%	1,0%	1,5%	2,0%	2,5%	3,0%	3,5%	4,0%	4,5%	5,0%	5,5%	6,0%	6,5%	7,0%	7,5%
0	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943	€ 85.943
1	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595	€ 83.595
2	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248	€ 81.248
3	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900	€ 78.900
4	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552	€ 76.552
5	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204	€ 74.204
6	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856	€ 71.856
7	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508	€ 69.508
8	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161	€ 67.161
9	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813	€ 64.813
10	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465	€ 62.465
11	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117	€ 60.117
12	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769	€ 57.769
13	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421	€ 55.421
14	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074	€ 53.074
15	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726	€ 50.726
16	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378	€ 48.378
17	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030	€ 46.030
18	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682	€ 43.682
19	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335	€ 41.335
20	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987	€ 38.987
21	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639	€ 36.639
22	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291	€ 34.291
23	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943	€ 31.943
24	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595	€ 29.595
25	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248	€ 27.248
26	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900	€ 24.900
27	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552	€ 22.552
28	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204	€ 20.204
29	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856	€ 17.856
30	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509	€ 15.509

Appendix XXII. Dynamic Discounting – Net Working Capital

DSO	Accounts Receivable	Free in AR/NWC	Customer AP	Total Benefit
0	€ -	€ 10.742.895	€ -10.742.895	€ -
1	€ 293.478	€ 10.449.417	€ -10.449.417	€ -
2	€ 586.955	€ 10.155.939	€ -10.155.939	€ -
3	€ 880.433	€ 9.862.462	€ -9.862.462	€ -
4	€ 1.173.910	€ 9.568.984	€ -9.568.984	€ -
5	€ 1.467.388	€ 9.275.507	€ -9.275.507	€ -
6	€ 1.760.866	€ 8.982.029	€ -8.982.029	€ -
7	€ 2.054.343	€ 8.688.551	€ -8.688.551	€ -
8	€ 2.347.821	€ 8.395.074	€ -8.395.074	€ -
9	€ 2.641.299	€ 8.101.596	€ -8.101.596	€ -
10	€ 2.934.776	€ 7.808.118	€ -7.808.118	€ -
11	€ 3.228.254	€ 7.514.641	€ -7.514.641	€ -
12	€ 3.521.731	€ 7.221.163	€ -7.221.163	€ -
13	€ 3.815.209	€ 6.927.686	€ -6.927.686	€ -
14	€ 4.108.687	€ 6.634.208	€ -6.634.208	€ -
15	€ 4.402.164	€ 6.340.730	€ -6.340.730	€ -
16	€ 4.695.642	€ 6.047.253	€ -6.047.253	€ -
17	€ 4.989.119	€ 5.753.775	€ -5.753.775	€ -
18	€ 5.282.597	€ 5.460.298	€ -5.460.298	€ -
19	€ 5.576.075	€ 5.166.820	€ -5.166.820	€ -
20	€ 5.869.552	€ 4.873.342	€ -4.873.342	€ -
21	€ 6.163.030	€ 4.579.865	€ -4.579.865	€ -
22	€ 6.456.508	€ 4.286.387	€ -4.286.387	€ -
23	€ 6.749.985	€ 3.992.909	€ -3.992.909	€ -
24	€ 7.043.463	€ 3.699.432	€ -3.699.432	€ -
25	€ 7.336.940	€ 3.405.954	€ -3.405.954	€ -
26	€ 7.630.418	€ 3.112.477	€ -3.112.477	€ -
27	€ 7.923.896	€ 2.818.999	€ -2.818.999	€ -
28	€ 8.217.373	€ 2.525.521	€ -2.525.521	€ -
29	€ 8.510.851	€ 2.232.044	€ -2.232.044	€ -
30	€ 8.804.329	€ 1.938.566	€ -1.938.566	€ 0
31	€ 9.097.806	€ 1.645.089	€ -1.645.089	€ -
32	€ 9.391.284	€ 1.351.611	€ -1.351.611	€ -
33	€ 9.684.761	€ 1.058.133	€ -1.058.133	€ -
34	€ 9.978.239	€ 764.656	€ -764.656	€ -
35	€ 10.271.717	€ 471.178	€ -471.178	€ 0,00
36	€ 10.565.194	€ 177.700	€ -177.700	€ 0,00
37	€ 10.858.672	€ -115.777	€ 115.777	€ 0,00
38	€ 11.152.149	€ -409.255	€ 409.255	€ 0,00
39	€ 11.445.627	€ -702.732	€ 702.732	€ -
40	€ 11.739.105	€ -996.210	€ 996.210	€ 0,00
41	€ 12.032.582	€ -1.289.688	€ 1.289.688	€ -
42	€ 12.326.060	€ -1.583.165	€ 1.583.165	€ -
43	€ 12.619.538	€ -1.876.643	€ 1.876.643	€ -
44	€ 12.913.015	€ -2.170.121	€ 2.170.121	€ -

45	€	13.206.493	€	-2.463.598	€	2.463.598	€	-
46	€	13.499.970	€	-2.757.076	€	2.757.076	€	-
47	€	13.793.448	€	-3.050.553	€	3.050.553	€	-
48	€	14.086.926	€	-3.344.031	€	3.344.031	€	-
49	€	14.380.403	€	-3.637.509	€	3.637.509	€	-
50	€	14.673.881	€	-3.930.986	€	3.930.986	€	-
51	€	14.967.358	€	-4.224.464	€	4.224.464	€	-
52	€	15.260.836	€	-4.517.941	€	4.517.941	€	-
53	€	15.554.314	€	-4.811.419	€	4.811.419	€	-
54	€	15.847.791	€	-5.104.897	€	5.104.897	€	-
55	€	16.141.269	€	-5.398.374	€	5.398.374	€	-
56	€	16.434.747	€	-5.691.852	€	5.691.852	€	-
57	€	16.728.224	€	-5.985.330	€	5.985.330	€	-
58	€	17.021.702	€	-6.278.807	€	6.278.807	€	-
59	€	17.315.179	€	-6.572.285	€	6.572.285	€	-
60	€	17.608.657	€	-6.865.762	€	6.865.762	€	-
61	€	17.902.135	€	-7.159.240	€	7.159.240	€	-
62	€	18.195.612	€	-7.452.718	€	7.452.718	€	-
63	€	18.489.090	€	-7.746.195	€	7.746.195	€	-
64	€	18.782.567	€	-8.039.673	€	8.039.673	€	-
65	€	19.076.045	€	-8.333.150	€	8.333.150	€	-
66	€	19.369.523	€	-8.626.628	€	8.626.628	€	-
67	€	19.663.000	€	-8.920.106	€	8.920.106	€	-
68	€	19.956.478	€	-9.213.583	€	9.213.583	€	-
69	€	20.249.956	€	-9.507.061	€	9.507.061	€	-
70	€	20.543.433	€	-9.800.539	€	9.800.539	€	-
71	€	20.836.911	€	-10.094.016	€	10.094.016	€	-
72	€	21.130.388	€	-10.387.494	€	10.387.494	€	-
73	€	21.423.866	€	-10.680.971	€	10.680.971	€	-
74	€	21.717.344	€	-10.974.449	€	10.974.449	€	-
75	€	22.010.821	€	-11.267.927	€	11.267.927	€	-
76	€	22.304.299	€	-11.561.404	€	11.561.404	€	-
77	€	22.597.777	€	-11.854.882	€	11.854.882	€	-
78	€	22.891.254	€	-12.148.359	€	12.148.359	€	-
79	€	23.184.732	€	-12.441.837	€	12.441.837	€	-
80	€	23.478.209	€	-12.735.315	€	12.735.315	€	-
81	€	23.771.687	€	-13.028.792	€	13.028.792	€	-
82	€	24.065.165	€	-13.322.270	€	13.322.270	€	-
83	€	24.358.642	€	-13.615.748	€	13.615.748	€	-
84	€	24.652.120	€	-13.909.225	€	13.909.225	€	-
85	€	24.945.597	€	-14.202.703	€	14.202.703	€	-
86	€	25.239.075	€	-14.496.180	€	14.496.180	€	-
87	€	25.532.553	€	-14.789.658	€	14.789.658	€	-
88	€	25.826.030	€	-15.083.136	€	15.083.136	€	-
89	€	26.119.508	€	-15.376.613	€	15.376.613	€	-
90	€	26.412.986	€	-15.670.091	€	15.670.091	€	-

Appendix XXIII. Reverse Factoring – Financing Costs

DSO	Nedcargo Costs	Nedcargo Benefit	Customer Benefit	Total Benefit
0	€ 116.287	€ 44.856	€ 41.087	€ 85.943
1	€ 114.233	€ 42.508	€ 41.087	€ 83.595
2	€ 112.178	€ 40.161	€ 41.087	€ 81.248
3	€ 110.124	€ 37.813	€ 41.087	€ 78.900
4	€ 108.070	€ 35.465	€ 41.087	€ 76.552
5	€ 106.015	€ 33.117	€ 41.087	€ 74.204
6	€ 103.961	€ 30.769	€ 41.087	€ 71.856
7	€ 101.907	€ 28.422	€ 41.087	€ 69.508
8	€ 99.852	€ 26.074	€ 41.087	€ 67.161
9	€ 97.798	€ 23.726	€ 41.087	€ 64.813
10	€ 95.744	€ 21.378	€ 41.087	€ 62.465
11	€ 93.689	€ 19.030	€ 41.087	€ 60.117
12	€ 91.635	€ 16.682	€ 41.087	€ 57.769
13	€ 89.581	€ 14.335	€ 41.087	€ 55.421
14	€ 87.526	€ 11.987	€ 41.087	€ 53.074
15	€ 85.472	€ 9.639	€ 41.087	€ 50.726
16	€ 83.418	€ 7.291	€ 41.087	€ 48.378
17	€ 81.363	€ 4.943	€ 41.087	€ 46.030
18	€ 79.309	€ 2.596	€ 41.087	€ 43.682
19	€ 77.255	€ 248	€ 41.087	€ 41.335
20	€ 75.200	€ -2.100	€ 41.087	€ 38.987
21	€ 73.146	€ -4.448	€ 41.087	€ 36.639
22	€ 71.092	€ -6.796	€ 41.087	€ 34.291
23	€ 69.037	€ -9.144	€ 41.087	€ 31.943
24	€ 66.983	€ -11.491	€ 41.087	€ 29.595
25	€ 64.929	€ -13.839	€ 41.087	€ 27.248
26	€ 62.874	€ -16.187	€ 41.087	€ 24.900
27	€ 60.820	€ -18.535	€ 41.087	€ 22.552
28	€ 58.766	€ -20.883	€ 41.087	€ 20.204
29	€ 56.711	€ -23.231	€ 41.087	€ 17.856
30	€ 54.657	€ -25.578	€ 41.087	€ 15.509
31	€ 52.602	€ -27.926	€ 41.087	€ 13.161
32	€ 50.548	€ -30.274	€ 41.087	€ 10.813
33	€ 48.494	€ -32.622	€ 41.087	€ 8.465
34	€ 46.439	€ -34.970	€ 41.087	€ 6.117
35	€ 44.385	€ -37.317	€ 41.087	€ 3.769
36	€ 42.331	€ -39.665	€ 41.087	€ 1.422
37	€ 40.276	€ -42.013	€ 41.087	€ -926
38	€ 38.222	€ -44.361	€ 41.087	€ -3.274
39	€ 36.168	€ -46.709	€ 41.087	€ -5.622
40	€ 34.113	€ -49.057	€ 41.087	€ -7.970
41	€ 32.059	€ -51.404	€ 41.087	€ -10.318
42	€ 30.005	€ -53.752	€ 41.087	€ -12.665
43	€ 27.950	€ -56.100	€ 41.087	€ -15.013
44	€ 25.896	€ -58.448	€ 41.087	€ -17.361

45	€	23.842	€	-60.796	€	41.087	€	-19.709
46	€	21.787	€	-63.143	€	41.087	€	-22.057
47	€	19.733	€	-65.491	€	41.087	€	-24.404
48	€	17.679	€	-67.839	€	41.087	€	-26.752
49	€	15.624	€	-70.187	€	41.087	€	-29.100
50	€	13.570	€	-72.535	€	41.087	€	-31.448
51	€	11.516	€	-74.883	€	41.087	€	-33.796
52	€	9.461	€	-77.230	€	41.087	€	-36.144
53	€	7.407	€	-79.578	€	41.087	€	-38.491
54	€	5.353	€	-81.926	€	41.087	€	-40.839
55	€	3.298	€	-84.274	€	41.087	€	-43.187
56	€	1.244	€	-86.622	€	41.087	€	-45.535
57	€	-810	€	-88.970	€	41.087	€	-47.883
58	€	-2.865	€	-91.317	€	41.087	€	-50.230
59	€	-4.919	€	-93.665	€	41.087	€	-52.578
60	€	-6.973	€	-96.013	€	41.087	€	-54.926
61	€	-9.028	€	-98.361	€	41.087	€	-57.274
62	€	-11.082	€	-100.709	€	41.087	€	-59.622
63	€	-13.137	€	-103.056	€	41.087	€	-61.970
64	€	-15.191	€	-105.404	€	41.087	€	-64.317
65	€	-17.245	€	-107.752	€	41.087	€	-66.665
66	€	-19.300	€	-110.100	€	41.087	€	-69.013
67	€	-21.354	€	-112.448	€	41.087	€	-71.361
68	€	-23.408	€	-114.796	€	41.087	€	-73.709
69	€	-25.463	€	-117.143	€	41.087	€	-76.056
70	€	-27.517	€	-119.491	€	41.087	€	-78.404
71	€	-29.571	€	-121.839	€	41.087	€	-80.752
72	€	-31.626	€	-124.187	€	41.087	€	-83.100
73	€	-33.680	€	-126.535	€	41.087	€	-85.448
74	€	-35.734	€	-128.882	€	41.087	€	-87.796
75	€	-37.789	€	-131.230	€	41.087	€	-90.143
76	€	-39.843	€	-133.578	€	41.087	€	-92.491
77	€	-41.897	€	-135.926	€	41.087	€	-94.839
78	€	-43.952	€	-138.274	€	41.087	€	-97.187
79	€	-46.006	€	-140.622	€	41.087	€	-99.535
80	€	-48.060	€	-142.969	€	41.087	€	-101.883
81	€	-50.115	€	-145.317	€	41.087	€	-104.230
82	€	-52.169	€	-147.665	€	41.087	€	-106.578
83	€	-54.223	€	-150.013	€	41.087	€	-108.926
84	€	-56.278	€	-152.361	€	41.087	€	-111.274
85	€	-58.332	€	-154.708	€	41.087	€	-113.622
86	€	-60.386	€	-157.056	€	41.087	€	-115.969
87	€	-62.441	€	-159.404	€	41.087	€	-118.317
88	€	-64.495	€	-161.752	€	41.087	€	-120.665
89	€	-66.549	€	-164.100	€	41.087	€	-123.013
90	€	-68.604	€	-166.448	€	41.087	€	-125.361

Appendix XXIV. Reverse Factoring – Break-Even Points

Program Rate	DSO Extension Break-Even Point
0,1%	519
0,2%	241
0,3%	148
0,4%	102
0,5%	74
0,6%	56
0,7%	42
0,8%	32
0,9%	25
1,0%	19
1,1%	14
1,2%	9
1,3%	6
1,4%	3
1,5%	0

Appendix XXV. Reverse Factoring – Interest & Net Working Capital Benefit

Payment Extension	Customer NWC	Interest Benefit
0	€ -	€ -
1	€ 293.478	€ 2.054
2	€ 586.955	€ 4.109
3	€ 880.433	€ 6.163
4	€ 1.173.910	€ 8.217
5	€ 1.467.388	€ 10.272
6	€ 1.760.866	€ 12.326
7	€ 2.054.343	€ 14.380
8	€ 2.347.821	€ 16.435
9	€ 2.641.299	€ 18.489
10	€ 2.934.776	€ 20.543
11	€ 3.228.254	€ 22.598
12	€ 3.521.731	€ 24.652
13	€ 3.815.209	€ 26.706
14	€ 4.108.687	€ 28.761
15	€ 4.402.164	€ 30.815
16	€ 4.695.642	€ 32.869
17	€ 4.989.119	€ 34.924
18	€ 5.282.597	€ 36.978
19	€ 5.576.075	€ 39.033
20	€ 5.869.552	€ 41.087
21	€ 6.163.030	€ 43.141
22	€ 6.456.508	€ 45.196
23	€ 6.749.985	€ 47.250
24	€ 7.043.463	€ 49.304
25	€ 7.336.940	€ 51.359
26	€ 7.630.418	€ 53.413
27	€ 7.923.896	€ 55.467
28	€ 8.217.373	€ 57.522
29	€ 8.510.851	€ 59.576
30	€ 8.804.329	€ 61.630

Appendix XXVI. Reverse Factoring – Net Working Capital

DSO	Account Receivable	Free in AR/NWC	Customer AP/NWC	Total Benefit
0	€ -	€ 10.742.895	€ 5.869.552	€ 16.612.447
1	€ 293.478	€ 10.449.417	€ 5.869.552	€ 16.318.969
2	€ 586.955	€ 10.155.939	€ 5.869.552	€ 16.025.492
3	€ 880.433	€ 9.862.462	€ 5.869.552	€ 15.732.014
4	€ 1.173.910	€ 9.568.984	€ 5.869.552	€ 15.438.537
5	€ 1.467.388	€ 9.275.507	€ 5.869.552	€ 15.145.059
6	€ 1.760.866	€ 8.982.029	€ 5.869.552	€ 14.851.581
7	€ 2.054.343	€ 8.688.551	€ 5.869.552	€ 14.558.104
8	€ 2.347.821	€ 8.395.074	€ 5.869.552	€ 14.264.626
9	€ 2.641.299	€ 8.101.596	€ 5.869.552	€ 13.971.148
10	€ 2.934.776	€ 7.808.118	€ 5.869.552	€ 13.677.671
11	€ 3.228.254	€ 7.514.641	€ 5.869.552	€ 13.384.193
12	€ 3.521.731	€ 7.221.163	€ 5.869.552	€ 13.090.716
13	€ 3.815.209	€ 6.927.686	€ 5.869.552	€ 12.797.238
14	€ 4.108.687	€ 6.634.208	€ 5.869.552	€ 12.503.760
15	€ 4.402.164	€ 6.340.730	€ 5.869.552	€ 12.210.283
16	€ 4.695.642	€ 6.047.253	€ 5.869.552	€ 11.916.805
17	€ 4.989.119	€ 5.753.775	€ 5.869.552	€ 11.623.327
18	€ 5.282.597	€ 5.460.298	€ 5.869.552	€ 11.329.850
19	€ 5.576.075	€ 5.166.820	€ 5.869.552	€ 11.036.372
20	€ 5.869.552	€ 4.873.342	€ 5.869.552	€ 10.742.895
21	€ 6.163.030	€ 4.579.865	€ 5.869.552	€ 10.449.417
22	€ 6.456.508	€ 4.286.387	€ 5.869.552	€ 10.155.939
23	€ 6.749.985	€ 3.992.909	€ 5.869.552	€ 9.862.462
24	€ 7.043.463	€ 3.699.432	€ 5.869.552	€ 9.568.984
25	€ 7.336.940	€ 3.405.954	€ 5.869.552	€ 9.275.507
26	€ 7.630.418	€ 3.112.477	€ 5.869.552	€ 8.982.029
27	€ 7.923.896	€ 2.818.999	€ 5.869.552	€ 8.688.551
28	€ 8.217.373	€ 2.525.521	€ 5.869.552	€ 8.395.074
29	€ 8.510.851	€ 2.232.044	€ 5.869.552	€ 8.101.596
30	€ 8.804.329	€ 1.938.566	€ 5.869.552	€ 7.808.118
31	€ 9.097.806	€ 1.645.089	€ 5.869.552	€ 7.514.641
32	€ 9.391.284	€ 1.351.611	€ 5.869.552	€ 7.221.163
33	€ 9.684.761	€ 1.058.133	€ 5.869.552	€ 6.927.686
34	€ 9.978.239	€ 764.656	€ 5.869.552	€ 6.634.208
35	€ 10.271.717	€ 471.178	€ 5.869.552	€ 6.340.730
36	€ 10.565.194	€ 177.700	€ 5.869.552	€ 6.047.253
37	€ 10.858.672	€ -115.777	€ 5.869.552	€ 5.753.775
38	€ 11.152.149	€ -409.255	€ 5.869.552	€ 5.460.298
39	€ 11.445.627	€ -702.732	€ 5.869.552	€ 5.166.820
40	€ 11.739.105	€ -996.210	€ 5.869.552	€ 4.873.342
41	€ 12.032.582	€ -1.289.688	€ 5.869.552	€ 4.579.865
42	€ 12.326.060	€ -1.583.165	€ 5.869.552	€ 4.286.387
43	€ 12.619.538	€ -1.876.643	€ 5.869.552	€ 3.992.909
44	€ 12.913.015	€ -2.170.121	€ 5.869.552	€ 3.699.432

45	€	13.206.493	€	-2.463.598	€	5.869.552	€	3.405.954
46	€	13.499.970	€	-2.757.076	€	5.869.552	€	3.112.477
47	€	13.793.448	€	-3.050.553	€	5.869.552	€	2.818.999
48	€	14.086.926	€	-3.344.031	€	5.869.552	€	2.525.521
49	€	14.380.403	€	-3.637.509	€	5.869.552	€	2.232.044
50	€	14.673.881	€	-3.930.986	€	5.869.552	€	1.938.566
51	€	14.967.358	€	-4.224.464	€	5.869.552	€	1.645.089
52	€	15.260.836	€	-4.517.941	€	5.869.552	€	1.351.611
53	€	15.554.314	€	-4.811.419	€	5.869.552	€	1.058.133
54	€	15.847.791	€	-5.104.897	€	5.869.552	€	764.656
55	€	16.141.269	€	-5.398.374	€	5.869.552	€	471.178
56	€	16.434.747	€	-5.691.852	€	5.869.552	€	177.700
57	€	16.728.224	€	-5.985.330	€	5.869.552	€	-115.777
58	€	17.021.702	€	-6.278.807	€	5.869.552	€	-409.255
59	€	17.315.179	€	-6.572.285	€	5.869.552	€	-702.732
60	€	17.608.657	€	-6.865.762	€	5.869.552	€	-996.210
61	€	17.902.135	€	-7.159.240	€	5.869.552	€	-1.289.688
62	€	18.195.612	€	-7.452.718	€	5.869.552	€	-1.583.165
63	€	18.489.090	€	-7.746.195	€	5.869.552	€	-1.876.643
64	€	18.782.567	€	-8.039.673	€	5.869.552	€	-2.170.121
65	€	19.076.045	€	-8.333.150	€	5.869.552	€	-2.463.598
66	€	19.369.523	€	-8.626.628	€	5.869.552	€	-2.757.076
67	€	19.663.000	€	-8.920.106	€	5.869.552	€	-3.050.553
68	€	19.956.478	€	-9.213.583	€	5.869.552	€	-3.344.031
69	€	20.249.956	€	-9.507.061	€	5.869.552	€	-3.637.509
70	€	20.543.433	€	-9.800.539	€	5.869.552	€	-3.930.986
71	€	20.836.911	€	-10.094.016	€	5.869.552	€	-4.224.464
72	€	21.130.388	€	-10.387.494	€	5.869.552	€	-4.517.941
73	€	21.423.866	€	-10.680.971	€	5.869.552	€	-4.811.419
74	€	21.717.344	€	-10.974.449	€	5.869.552	€	-5.104.897
75	€	22.010.821	€	-11.267.927	€	5.869.552	€	-5.398.374
76	€	22.304.299	€	-11.561.404	€	5.869.552	€	-5.691.852
77	€	22.597.777	€	-11.854.882	€	5.869.552	€	-5.985.330
78	€	22.891.254	€	-12.148.359	€	5.869.552	€	-6.278.807
79	€	23.184.732	€	-12.441.837	€	5.869.552	€	-6.572.285
80	€	23.478.209	€	-12.735.315	€	5.869.552	€	-6.865.762
81	€	23.771.687	€	-13.028.792	€	5.869.552	€	-7.159.240
82	€	24.065.165	€	-13.322.270	€	5.869.552	€	-7.452.718
83	€	24.358.642	€	-13.615.748	€	5.869.552	€	-7.746.195
84	€	24.652.120	€	-13.909.225	€	5.869.552	€	-8.039.673
85	€	24.945.597	€	-14.202.703	€	5.869.552	€	-8.333.150
86	€	25.239.075	€	-14.496.180	€	5.869.552	€	-8.626.628
87	€	25.532.553	€	-14.789.658	€	5.869.552	€	-8.920.106
88	€	25.826.030	€	-15.083.136	€	5.869.552	€	-9.213.583
89	€	26.119.508	€	-15.376.613	€	5.869.552	€	-9.507.061
90	€	26.412.986	€	-15.670.091	€	5.869.552	€	-9.800.539

Appendix XXVII. Fixed Assets Financing - Interest Costs

Year	Write-off	Cum. Write-off	Debt	Nedcargo Interest	Supplier Interest	FAF Supplier Interest
1	€ 10.313	€ 10.313	€ 72.188	€ 1.238	€ 2.640	€ 1.939
2	€ 10.313	€ 20.625	€ 61.875	€ 1.083	€ 2.310	€ 1.696
3	€ 10.313	€ 30.938	€ 51.563	€ 928	€ 1.980	€ 1.454
4	€ 10.313	€ 41.250	€ 41.250	€ 773	€ 1.650	€ 1.212
5	€ 10.313	€ 51.563	€ 30.938	€ 619	€ 1.320	€ 969
6	€ 10.313	€ 61.875	€ 20.625	€ 464	€ 990	€ 727
7	€ 10.313	€ 72.188	€ 10.313	€ 309	€ 660	€ 485
8	€ 10.313	€ 82.500	€ -	€ 155	€ 330	€ 242
9	€ -	€ 82.500	€ -	€ -	€ -	€ -
10	€ -	€ 82.500	€ -	€ -	€ -	€ -
Total	**€ 82.500**			**€ 5.569**	**€ 11.880**	**€ 8.724**

Appendix XXVIII. Fixed Assets Financing - Nedcargo Cash In

Year	Nedcargo Costs	Rent In	Interest In	Total In	Annualised Rent In	Annualised Interest In	Total Annualised
1	€ 11.550	€ 10.313	€ 1.939	€ 12.251	€ 10.313	€ 1.939	€ 12.251
2	€ 11.395	€ 10.313	€ 1.696	€ 12.009	€ 10.160	€ 1.671	€ 11.831
3	€ 11.241	€ 10.313	€ 1.454	€ 11.767	€ 10.010	€ 1.411	€ 11.421
4	€ 11.086	€ 10.313	€ 1.212	€ 11.524	€ 9.862	€ 1.159	€ 11.021
5	€ 10.931	€ 10.313	€ 969	€ 11.282	€ 9.716	€ 913	€ 10.630
6	€ 10.777	€ 10.313	€ 727	€ 11.040	€ 9.573	€ 675	€ 10.248
7	€ 10.622	€ 10.313	€ 485	€ 10.797	€ 9.431	€ 443	€ 9.874
8	€ 10.467	€ 10.313	€ 242	€ 10.555	€ 9.292	€ 218	€ 9.510
9	€ -	€ -	€ -	€ -	€ -	€ -	€ -
10	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Total	**€ 88.069**	**€ 82.500**	**€ 8.724**	**€ 91.224**	**€ 78.357**	**€ 8.430**	**€ 86.787**

Appendix XXIX. Lee's Demand & Supply Characteristics

Table XXIX.I Demand Characteristics

Functional	Innovative
Low demand uncertainties	Higher demand uncertainties
More predictable demand	Difficult to forecast
Stable demand	Variable demand
Long product life cycle	Short selling season
Low inventory costs	High inventory costs
Low profit margins	High profit margins
Low product variety	High product variety
Higher volume per SKU	Low volumes per SKU
Low stockout costs	High stockout costs
Low obsolescence	High obsolescence

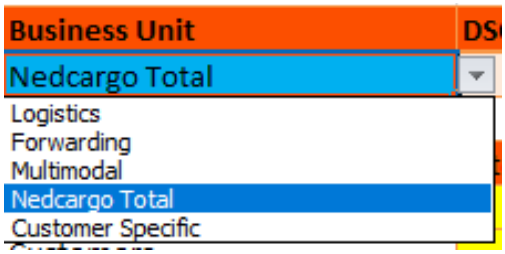
Table XXIX.II Supply Characteristics

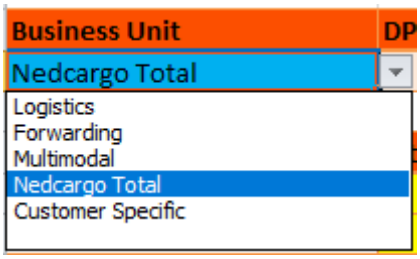
Stable	Evolving
Less breakdowns	Vulnarable to breakdowns
Stable and higher yields	Viriable and lower yields
Less quality problems	Potential quility problems
More supply sources	Limited supply sources
Reliable suppliers	Unreliable suppliers
Less process changes	More process changes
Less capacity constraint	Potential capacity constrained
Easier to changeover	Difficult to changeover
Flexible	Inflexible
Dependable lead-time	Variable lead-time

Appendix XXX. Instruction Manual – Reverse Factoring

1. Select the right tab in the Excel model:
   - 'Reverse Factoring Cust.' If Nedcargo is going to adopt Reverse Factoring from customers
   - 'Reverse Factoring Supp.' If Nedcargo is going to offer Reverse Factoring to suppliers

2. Click on the blue coloured cell (A9) and click on the arrow next to the blue coloured cell in order to select the business unit for which you want to test the model; logistics, forwarding, multimodal, Nedcargo total or customer/supplier specific





2a. If you want to test the model for a specific customer, fill in the yellow cells with:
- The average Days Sales Outstanding payment term (B6)
- The average Days Sales Outstanding (C6)
- The weighted average Days Sales Outstanding payment term (D6)
- The weighted average Days Sales Outstanding (E6)
- The sales value related to the customer (F6)
- The interest rate of Nedcargo at the bank (B13)
- The interest rate of the customer at the bank (B14)
- The programme rate which the bank charges to Nedcargo for early payment (B15)
- The payment term extension which the customer will receive (B16)
-

Business Unit	DSO PT	DSO	WADSO PT	WADSO	Sales Value
Logistics	29,1	34,7	32,8	37,0	€ 66.532.558
Forwarding	28,0	41,1	27,9	37,5	€ 20.329.417
Multimodal	29,1	40,0	29,6	34,3	€ 20.257.356
Nedcargo Total			31,3	36,6	€ 107.119.330
Customer Specific					
Heineken Nederland Supply	27,4	29,6	28,4	25,4	€ 5.404.850

Party	Interest Rate
Nedcargo	1,5%
Customers	0,7%
Programme Rate	0,7%
Payment Term Extension	65,0

2b. If you want to test the model for a specific supplier, fill in the yellow cells with:
- The average Days Payable Outstanding payment term (B6)
- The average Days Payable Outstanding (C6)
- The weighted average Days Payable Outstanding payment term (D6)
- The weighted average Days Payable Outstanding (E6)
- The purchasing value related to the supplier (F6)
- The interest rate of the supplier at the bank (B13)
- The interest rate of Nedcargo at the bank (B14)
- The programme rate which the bank charges the supplier for early payment (B15)
- The payment extension which Nedcargo will receive (B16)

Business Unit	DPO PT	DPO	WADPO PT	WADPO	Purchasing Value
Logistics	23,3	37,0	15,2	23,7	€ -52.861.812
Forwarding	26,8	42,4	28,3	29,6	€ -12.792.784
Multimodal	22,0	41,8	20,2	31,8	€ -15.595.762
Nedcargo Total			18,2	26,2	€ -81.250.359
Customer Specific					

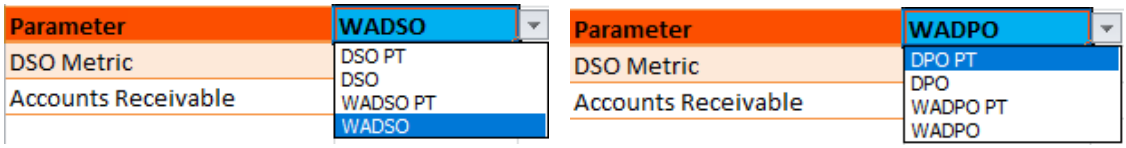
Party	Interest Rate
Suppliers	3,2%
Nedcargo	1,5%
Program Rate	0,7%
Payment Term Extension	65,0

3. The current financing costs of each metric and the related accounts receivable are automatically calculated:

Costs For	DSO PT	DSO	WADSO PT	WADSO
Financing costs Nedcargo	€ -	€ -	€ 137.584	€ 161.143

Costs For	DSO PT	DSO	WADSO PT	WADSO
Accounts Receivable Nedcargo	€ -	€ -	€ 9.172.295	€ 10.742.895

4. Click on:
   - Customer: the blue coloured cell (B21) and click on the arrow next to the blue coloured cell in order to select the DSO metric that you wish to use for the calculations
   - Supplier: the blue coloured cell (B21) and click on the arrow next to the blue coloured cell in order to select the DPO metric that you wish to use for the calculations



5. View:
   - Customer: the new financing costs for Nedcargo and the cash benefit for Nedcargo and the customer for any other DSO in the table from A25 to E116
   - Supplier: the new financing costs for the supplier and the cash benefit for the supplier and the customer for any other DPO in the table from A25 to E116

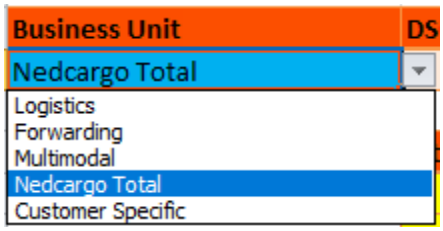
6. View:
   - Customer: the impact on the Net Working Capital in the table from G25 to K116
   - Supplier: the impact on the Net Working Capital in the table from G25 to K116

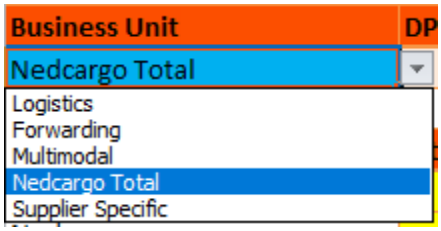
7. View:
   - Customer: the impact of the payment term extension on the Net Working Capital and interest benefit for the customer in the table from M1 to O62
   - Supplier: the impact of the payment term extension on the Net Working Capital and interest benefit for Nedcargo in the table from M1 to O62

Appendix XXXI. Instruction Manual – Dynamic Discounting

1. Select the right tab in the Excel model:
   - 'Dynamic Discounting Cust.' If Nedcargo is going to use Dynamic Discounting with customers
   - 'Dynamic Discounting Supp.' If Nedcargo is going to use Dynamic Discounting with suppliers

2. Click on the blue coloured cell (A9) and click on the arrow next to the blue coloured cell in order to select the business unit for which you want to test the model; logistics, forwarding, multimodal, Nedcargo total or customer/supplier specific.





2a. If you want to test the model for a specific customer, fill in the yellow cells with:
   - The average Days Sales Outstanding payment term (B6)
   - The average Days Sales Outstanding (C6)
   - The weighted average Days Sales Outstanding payment term (D6)
   - The weighted average Days Sales Outstanding (E6)
   - The sales value related to the customer (F6)
   - The interest rate of Nedcargo at the bank (B12)
   - The interest rate of the customer at the bank (B13)

Business Unit	DSO PT	DSO	WADSO PT	WADSO	Sales Value
Logistics	29,1	34,7	32,8	37,0	€ 66.532.558
Forwarding	28,0	41,1	27,9	37,5	€ 20.329.417
Multimodal	29,1	40,0	29,6	34,3	€ 20.257.356
Nedcargo Total			31,3	36,6	€ 107.119.330
Customer Specific					

Party	Interest Rate
Nedcargo	1,5%
Customer	0,7%

2b. If you want to test the model for a specific supplier, fill in the yellow cells with:
   - The average Days Payable Outstanding payment term (B6)
   - The average Days Payable Outstanding (C6)
   - The weighted average Days Payable Outstanding payment term (D6)
   - The weighted average Days Payable Outstanding (E6)
   - The purchasing value related to the supplier (F6)
   - The interest rate of the supplier at the bank (B12)
   - The interest rate of Nedcargo at the bank (B13)

3. Click on:
   - Customer: the blue coloured cell (B18) and click on the arrow next to the blue coloured cell in order to select the DSO metric that you wish to use for the calculations
   - Supplier: the blue coloured cell (B18) and click on the arrow next to the blue coloured cell in order to select the DPO metric that you wish to use for the calculations

Parameter	WADSO
DSO Metric	
Accounts Receivable	

DSO PT
DSO
WADSO PT
WADSO

Parameter	WADPO
DSO Metric	
Accounts Receivable	

DPO PT
DPO
WADPO PT
WADPO

4. Only if you prefer a quick calculation on the effects of Dynamic Discounting, fill in the yellow cells. Otherwise, go to step 5:
   - Customer: The fast customer calculation table in cells M1 to N15
   - Supplier: The fast supplier calculation table in cells M1 to N15

Fast Customer Calculation	
New Days Sales Outstanding	10
New Financing Costs Nedcargo	€ 44.022
Financing Benefit Nedcargo	€ 117.122
Financing Benefit Customer	€ -54.657
Total Financing Benefit	€ 62.465
Annual Discount/Fee	3%
Discount/Fee	€ 234.244
Nedcargo Benefit	€ -117.122
Customer Benefit	€ 179.587
Total Benefit	€ 62.465
Nedcargo Receivables	€ 2.934.776
Nedcargo NWC	€ 7.808.118
Customer NWC	€ -7.808.118
Total NWC	€ -

Fast Supplier Calculation	
New Days Payable Outstanding	10
New Financing Costs Supplier	€ 71.233
Financing Benefit Supplier	€ 115.258
Financing Benefit Nedcargo	€ -54.027
Total Financing Benefit	€ 61.231
Annual Discount/Fee	3%
Discount/Fee	€ 108.054
Supplier Benefit	€ 7.204
Nedcargo Benefit	€ 54.027
Total Benefit	€ 61.231
Supplier Receivables	€ 2.226.037
Supplier NWC	€ 3.601.805
Nedcargo NWC	€ -3.601.805
Total NWC	€ -

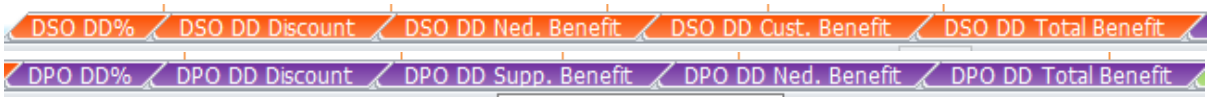
5. The current financing costs of each metric and the related accounts receivable are automatically calculated.

Costs For	DSO PT	DSO	WADSO PT	WADSO
Financing Costs Nedcargo	€ -	€ -	€ 137.584	€ 161.143

Costs For	DSO PT	DSO	WADSO PT	WADSO
Accounts Receivable Nedcargo	€ -	€ -	€ 9.172.295	€ 10.742.895

6. For a more detailed view, view the right tables:
   - Customer: view the table in cells A23 to E114 for the financing costs, and the table in cells G23 to K114 for the Net Working Capital
   - Supplier: view the table in cells A23 to E114 for the financing costs, and the table in cells G23 to K114 for the Net Working Capital

7. View:
   - Customer: the orange tabs and search the requested discount/fee on annual basis and the new DSO. This will show the discount/fee on annual basis, the cash benefit for Nedcargo and the customer and the total cash benefit
   - Supplier: the purple table and search the requested discount/fee on annual basis and the new DPO. This will show the discount/fee on annual basis, the cash benefit for the supplier and Nedcargo and the total cash benefit



Appendix XXXII. Instruction Manual - Fixed Assets Financing

1. Select the right tab in the Excel model:
   - 'Fixed Assets Cust.' If a customer is going to finance a fixed asset for Nedcargo
   - 'Fixed Assets Supp.' If Nedcargo is going to finance a fixed asset for a supplier

2. Fill in:

2a. If you want to test the model for a specific customer, fill in the yellow cells with:
   - The interest rate of the Nedcargo at the bank (B2)
   - The interest rate that will be charged to Nedcargo by the customer for financing the fixed asset (B3)
   - The interest rate of the customer at the bank (B4)
   - The duration of the loan at the bank that is used to finance the fixed asset (B5)
   - Select if Nedcargo will purchase the fixed asset or not (B6)

Party	Parameter
Nedcargo Interest	1,5%
FAF Nedcargo Interest	1,10%
Customer Interest	0,7%
Duration Of The Loan (Years)	6
Nedcargo Owns Fized Asset After Contract?	Yes

2b. If you want to test the model for a specific customer, fill in the yellow cells with:
   - The interest rate of the supplier at the bank (B2)
   - The interest rate that will be charged to the supplier by the Nedcargo for financing the fixed asset (B3)
   - The interest rate of Nedcargo at the bank (B4)
   - The duration of the loan at the bank that is used to finance the fixed asset (B5)
   - Select if the supplier will purchase the fixed asset or not (B6)

Party	Parameter
Supplier Interest	3,2%
FAF Supplier Interest	2,35%
Nedcargo Interest	1,5%
Duration Of The Loan (Years)	8
Supplier Owns Asset After Contract?	Yes

3. Fill the remaining yellow cells with:
   - The price for which the fixed asset is purchased (B9)
   - The expected terminal value of the fixed asset (C9)

Fixed Asset	New Price	Terminal Value
Truck	€ 82.500	€ 19.000

4. All cash in and cash out transactions will be calculated automatically:

Year	Write-off	Cum. Write-off	Debt	Nedcargo Interest	Supplier Interest	FAF Supplier Interest
1	€ 10.313	€ 10.313	€ 72.188	€ 1.238	€ 2.640	€ 1.939
2	€ 10.313	€ 20.625	€ 61.875	€ 1.083	€ 2.310	€ 1.696
3	€ 10.313	€ 30.938	€ 51.563	€ 928	€ 1.980	€ 1.454
4	€ 10.313	€ 41.250	€ 41.250	€ 773	€ 1.650	€ 1.212
5	€ 10.313	€ 51.563	€ 30.938	€ 619	€ 1.320	€ 969
6	€ 10.313	€ 61.875	€ 20.625	€ 464	€ 990	€ 727
7	€ 10.313	€ 72.188	€ 10.313	€ 309	€ 660	€ 485
8	€ 10.313	€ 82.500	€ -	€ 155	€ 330	€ 242
9	€ -	€ 82.500	€ -	€ -	€ -	€ -
10	€ -	€ 82.500	€ -	€ -	€ -	€ -
Total	**€ 82.500**			**€ 5.569**	**€ 11.880**	**€ 8.724**

Year	Nedcargo Costs	Rent In	Interest In	Total In	Annualised Rent In	Annualised Interest In	Total Annualised
1	€ 11.550	€ 10.313	€ 1.939	€ 12.251	€ 10.313	€ 1.939	€ 12.251
2	€ 11.395	€ 10.313	€ 1.696	€ 12.009	€ 10.160	€ 1.671	€ 11.831
3	€ 11.241	€ 10.313	€ 1.454	€ 11.767	€ 10.010	€ 1.411	€ 11.421
4	€ 11.086	€ 10.313	€ 1.212	€ 11.524	€ 9.862	€ 1.159	€ 11.021
5	€ 10.931	€ 10.313	€ 969	€ 11.282	€ 9.716	€ 913	€ 10.630
6	€ 10.777	€ 10.313	€ 727	€ 11.040	€ 9.573	€ 675	€ 10.248
7	€ 10.622	€ 10.313	€ 485	€ 10.797	€ 9.431	€ 443	€ 9.874
8	€ 10.467	€ 10.313	€ 242	€ 10.555	€ 9.292	€ 218	€ 9.510
9	€ -	€ -	€ -	€ -	€ -	€ -	€ -
10	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Total	**€ 88.069**	**€ 82.500**	**€ 8.724**	**€ 91.224**	**€ 78.357**	**€ 8.430**	**€ 86.787**

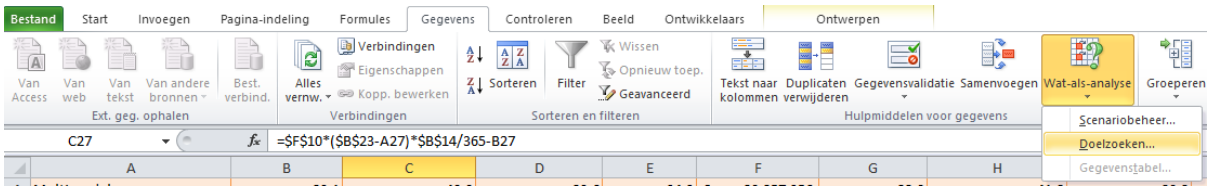
5. Which finally results in the outcome of the model, showing the Net Present Value, Return On Investment and interest benefit:

Metric	Value
Annualised Rent In	€ 78.357
Annualised Interest In	€ 8.430
Annualised Terminal Value	€ -
Investment	€ 82.500
Net Present Value	€ 4.287
Return On Investment	5,2%
Supplier Interest Benefit	€ 3.156

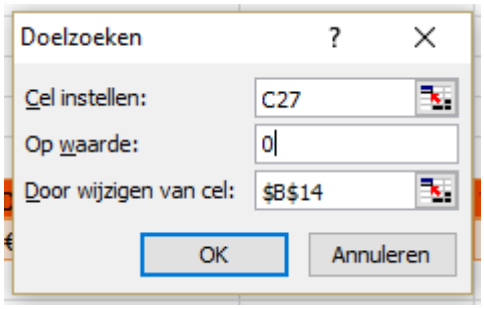
Appendix XXXIII. Instruction Manual – Interest Limit Control

1. When using the Excel model to calculate the benefits for a model, select the cell which indicates the cash benefit for Nedcargo:
   - 'Dynamic Discounting Cust.': (C24)
   - 'Reverse Factoring Cust.': (C26)
   - 'Fixed Assets Cust.': (B18)
   - 'Fixed Assets Supp.': (B16)

2. Now:
   - Click on the tab 'Gegevens'
   - Select the 'Wat-als-analyse'
   - Select 'Doelzoeken'.



3. Fill in the screen that pops up with:
   - 'Cel instellen': should already be set to the cell previously selected at step 2.
   - 'Op waarde': set this value to 0.
   - 'Door wijzigen van cel': select the cell which indicates the interest rate of Nedcargo.
     - 'Dynamic Discounting Cust.': (B13)
     - 'Reverse Factoring Cust.': (B14)
     - 'Fixed Assets Cust.': (B2)
     - 'Fixed Assets Supp.': (B4)



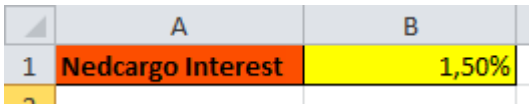
4. Press 'OK', the function automatically calculates the interest rate limit for Nedcargo.

5. Copy the interest rate outcome of the formula (from the cell selected in step 4) and add it to the correct table in the tab 'Control'.

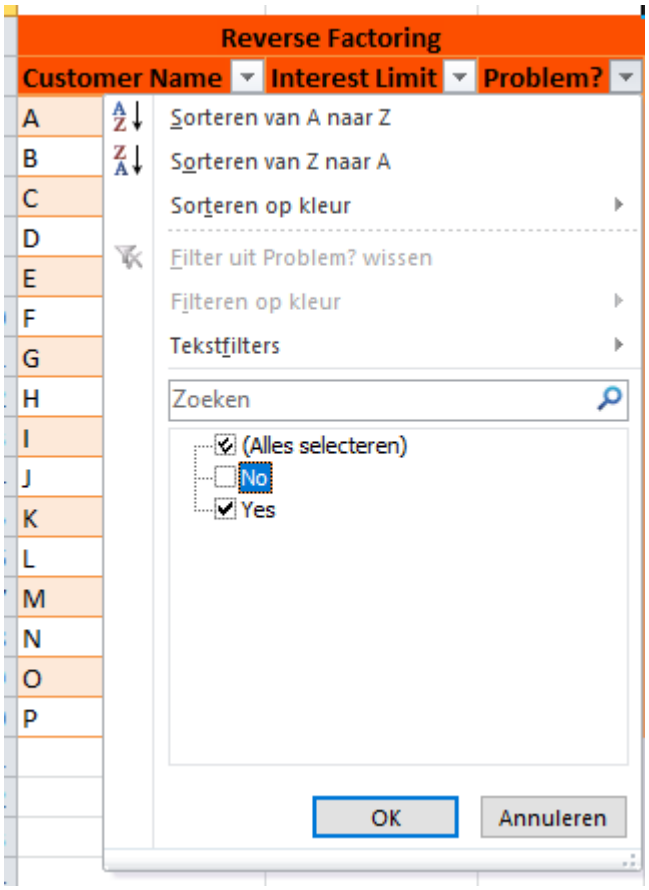
Control

Reverse Factoring		
Customer Name	**Interest Limit**	**Problem?**
A	1,00%	No
B	1,70%	Yes
C	1,50%	No

6. Every time the interest rate changes (which should be every 3 months), fill in:
   - The new interest rate (B2) in the 'Control' tab.



7. The model will show whether or not there is a problem due to the interest rate. Filter the column on ‘Yes’ by clicking on the arrow next to ‘Problem?’ in order to show all problems which occur.



Appendix XXXIV. Return on Investment Nedcargo – Minimum Costs

Payment Extension	Nedcargo NWC	Interest Benefit	Return Time (Months)	Perpetuity
0	€ -	€ -		€ -
1	€ 211.474	€ 3.339	23,27	€ 211.474
2	€ 422.947	€ 6.678	11,63	€ 422.947
3	€ 634.421	€ 10.017	7,76	€ 634.421
4	€ 845.894	€ 13.356	5,82	€ 845.894
5	€ 1.057.368	€ 16.695	4,65	€ 1.057.368
6	€ 1.268.841	€ 20.034	3,88	€ 1.268.841
7	€ 1.480.315	€ 23.373	3,32	€ 1.480.315
8	€ 1.691.788	€ 26.712	2,91	€ 1.691.788
9	€ 1.903.262	€ 30.052	2,59	€ 1.903.262
10	€ 2.114.735	€ 33.391	2,33	€ 2.114.735
11	€ 2.326.209	€ 36.730	2,12	€ 2.326.209
12	€ 2.537.682	€ 40.069	1,94	€ 2.537.682
13	€ 2.749.156	€ 43.408	1,79	€ 2.749.156
14	€ 2.960.630	€ 46.747	1,66	€ 2.960.630
15	€ 3.172.103	€ 50.086	1,55	€ 3.172.103
16	€ 3.383.577	€ 53.425	1,45	€ 3.383.577
17	€ 3.595.050	€ 56.764	1,37	€ 3.595.050
18	€ 3.806.524	€ 60.103	1,29	€ 3.806.524
19	€ 4.017.997	€ 63.442	1,22	€ 4.017.997
20	€ 4.229.471	€ 66.781	1,16	€ 4.229.471
21	€ 4.440.944	€ 70.120	1,11	€ 4.440.944
22	€ 4.652.418	€ 73.459	1,06	€ 4.652.418
23	€ 4.863.891	€ 76.798	1,01	€ 4.863.891
24	€ 5.075.365	€ 80.137	0,97	€ 5.075.365
25	€ 5.286.838	€ 83.476	0,93	€ 5.286.838
26	€ 5.498.312	€ 86.815	0,89	€ 5.498.312
27	€ 5.709.785	€ 90.155	0,86	€ 5.709.785
28	€ 5.921.259	€ 93.494	0,83	€ 5.921.259
29	€ 6.132.733	€ 96.833	0,80	€ 6.132.733
30	€ 6.344.206	€ 100.172	0,78	€ 6.344.206
31	€ 6.555.680	€ 103.511	0,75	€ 6.555.680
32	€ 6.767.153	€ 106.850	0,73	€ 6.767.153
33	€ 6.978.627	€ 110.189	0,71	€ 6.978.627
34	€ 7.190.100	€ 113.528	0,68	€ 7.190.100
35	€ 7.401.574	€ 116.867	0,66	€ 7.401.574
36	€ 7.613.047	€ 120.206	0,65	€ 7.613.047
37	€ 7.824.521	€ 123.545	0,63	€ 7.824.521
38	€ 8.035.994	€ 126.884	0,61	€ 8.035.994
39	€ 8.247.468	€ 130.223	0,60	€ 8.247.468
40	€ 8.458.941	€ 133.562	0,58	€ 8.458.941
41	€ 8.670.415	€ 136.901	0,57	€ 8.670.415
42	€ 8.881.889	€ 140.240	0,55	€ 8.881.889
43	€ 9.093.362	€ 143.579	0,54	€ 9.093.362
44	€ 9.304.836	€ 146.918	0,53	€ 9.304.836
45	€ 9.516.309	€ 150.258	0,52	€ 9.516.309
46	€ 9.727.783	€ 153.597	0,51	€ 9.727.783
47	€ 9.939.256	€ 156.936	0,50	€ 9.939.256
48	€ 10.150.730	€ 160.275	0,48	€ 10.150.730
49	€ 10.362.203	€ 163.614	0,47	€ 10.362.203
50	€ 10.573.677	€ 166.953	0,47	€ 10.573.677
51	€ 10.785.150	€ 170.292	0,46	€ 10.785.150
52	€ 10.996.624	€ 173.631	0,45	€ 10.996.624
53	€ 11.208.097	€ 176.970	0,44	€ 11.208.097
54	€ 11.419.571	€ 180.309	0,43	€ 11.419.571
55	€ 11.631.044	€ 183.648	0,42	€ 11.631.044
56	€ 11.842.518	€ 186.987	0,42	€ 11.842.518
57	€ 12.053.992	€ 190.326	0,41	€ 12.053.992
58	€ 12.265.465	€ 193.665	0,40	€ 12.265.465
59	€ 12.476.939	€ 197.004	0,39	€ 12.476.939
60	€ 12.688.412	€ 200.343	0,39	€ 12.688.412

Appendix XXXV. Return on Investment Nedcargo – Maximum Costs

Payment Extension	Nedcargo NWC	Interest Benefit	Return Time (Months)	Perpetuity
0	€ -	€ -		€ -
1	€ 211.474	€ 3.339	63,70	€ 211.474
2	€ 422.947	€ 6.678	31,85	€ 422.947
3	€ 634.421	€ 10.017	21,23	€ 634.421
4	€ 845.894	€ 13.356	15,92	€ 845.894
5	€ 1.057.368	€ 16.695	12,74	€ 1.057.368
6	€ 1.268.841	€ 20.034	10,62	€ 1.268.841
7	€ 1.480.315	€ 23.373	9,10	€ 1.480.315
8	€ 1.691.788	€ 26.712	7,96	€ 1.691.788
9	€ 1.903.262	€ 30.052	7,08	€ 1.903.262
10	€ 2.114.735	€ 33.391	6,37	€ 2.114.735
11	€ 2.326.209	€ 36.730	5,79	€ 2.326.209
12	€ 2.537.682	€ 40.069	5,31	€ 2.537.682
13	€ 2.749.156	€ 43.408	4,90	€ 2.749.156
14	€ 2.960.630	€ 46.747	4,55	€ 2.960.630
15	€ 3.172.103	€ 50.086	4,25	€ 3.172.103
16	€ 3.383.577	€ 53.425	3,98	€ 3.383.577
17	€ 3.595.050	€ 56.764	3,75	€ 3.595.050
18	€ 3.806.524	€ 60.103	3,54	€ 3.806.524
19	€ 4.017.997	€ 63.442	3,35	€ 4.017.997
20	€ 4.229.471	€ 66.781	3,18	€ 4.229.471
21	€ 4.440.944	€ 70.120	3,03	€ 4.440.944
22	€ 4.652.418	€ 73.459	2,90	€ 4.652.418
23	€ 4.863.891	€ 76.798	2,77	€ 4.863.891
24	€ 5.075.365	€ 80.137	2,65	€ 5.075.365
25	€ 5.286.838	€ 83.476	2,55	€ 5.286.838
26	€ 5.498.312	€ 86.815	2,45	€ 5.498.312
27	€ 5.709.785	€ 90.155	2,36	€ 5.709.785
28	€ 5.921.259	€ 93.494	2,27	€ 5.921.259
29	€ 6.132.733	€ 96.833	2,20	€ 6.132.733
30	€ 6.344.206	€ 100.172	2,12	€ 6.344.206
31	€ 6.555.680	€ 103.511	2,05	€ 6.555.680
32	€ 6.767.153	€ 106.850	1,99	€ 6.767.153
33	€ 6.978.627	€ 110.189	1,93	€ 6.978.627
34	€ 7.190.100	€ 113.528	1,87	€ 7.190.100
35	€ 7.401.574	€ 116.867	1,82	€ 7.401.574
36	€ 7.613.047	€ 120.206	1,77	€ 7.613.047
37	€ 7.824.521	€ 123.545	1,72	€ 7.824.521
38	€ 8.035.994	€ 126.884	1,68	€ 8.035.994
39	€ 8.247.468	€ 130.223	1,63	€ 8.247.468
40	€ 8.458.941	€ 133.562	1,59	€ 8.458.941
41	€ 8.670.415	€ 136.901	1,55	€ 8.670.415
42	€ 8.881.889	€ 140.240	1,52	€ 8.881.889
43	€ 9.093.362	€ 143.579	1,48	€ 9.093.362
44	€ 9.304.836	€ 146.918	1,45	€ 9.304.836
45	€ 9.516.309	€ 150.258	1,42	€ 9.516.309
46	€ 9.727.783	€ 153.597	1,38	€ 9.727.783
47	€ 9.939.256	€ 156.936	1,36	€ 9.939.256
48	€ 10.150.730	€ 160.275	1,33	€ 10.150.730
49	€ 10.362.203	€ 163.614	1,30	€ 10.362.203
50	€ 10.573.677	€ 166.953	1,27	€ 10.573.677
51	€ 10.785.150	€ 170.292	1,25	€ 10.785.150
52	€ 10.996.624	€ 173.631	1,22	€ 10.996.624
53	€ 11.208.097	€ 176.970	1,20	€ 11.208.097
54	€ 11.419.571	€ 180.309	1,18	€ 11.419.571
55	€ 11.631.044	€ 183.648	1,16	€ 11.631.044
56	€ 11.842.518	€ 186.987	1,14	€ 11.842.518
57	€ 12.053.992	€ 190.326	1,12	€ 12.053.992
58	€ 12.265.465	€ 193.665	1,10	€ 12.265.465
59	€ 12.476.939	€ 197.004	1,08	€ 12.476.939
60	€ 12.688.412	€ 200.343	1,06	€ 12.688.412