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MASTER THESIS

Working capital management – the example of the handling company

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Declaration of Authorship

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature, and the thesis has not been used to obtain a different or the same degree.

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Prague, 22 December 2017

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Abstract

Nowadays working capital management became one of the most significant focuses of the managers of the companies. Regarding this, there are quite strict procedures and policies in place for the multinational corporations to regulate the working capital management and the management of its elements in the subsidiaries. Managing working capital of the subsidiary of the international handling company centrally provides the necessary guarantees, that the company will be able to repay the debts on time and will have enough of funds for the purposes of development. In spite of this, it is not always possible to improve every element of the working capital in this particular business. This thesis focuses on the working capital and liquidity management of the handling company and assessment of its efficiency.

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Keywords  working capital management, liquidity management, cash conversion cycle, fixed assets, inventory
Contents
Declaration of Authorship........................................................................................................... ii
Acknowledgments...................................................................................................................... iii
Abstract........................................................................................................................................ iv

Contents........................................................................................................................................ v

Introduction ...................................................................................................................................... 1

1 Liquidity management and its importance in the company
............................................................................................................................................... 3
  1.1 Working capital elements............................................................................................ 3
     1.1.1 Cash and cash equivalents ................................................................... 3
     1.1.2 Accounts receivable ................................................................................. 4
     1.1.3 Inventory .................................................................................................. 5
     1.1.4 Accounts payable ...................................................................................... 5
  1.2 Static measures of liquidity ....................................................................................... 6
  1.3 Dynamic measure of liquidity – Cash Conversion Cycle ..................................... 11

2 Working capital management as a part of liquidity management
............................................................................................................................................... 14
  2.1 The evolution of the role of working capital management ................................... 15
  2.2 Ratios overview ....................................................................................................... 21
  2.3 Management of working capital on international basis ...................................... 23
     2.3.1 Cash pooling ......................................................................................... 25
     2.3.2 Netting .................................................................................................. 30

3 Working capital management – practical case ........................................................... 32
  3.1 Company overview ................................................................................................. 32
  3.2 Liquidity ratios and CCC – analysis ..................................................................... 36
  3.3 Activity utilization measures – analysis .................................................................. 39
  3.4 The probability of financial distress – Altman’s Z”-score .................................... 42
  3.5 Working capital management of the Company on international level .................... 44

Conclusion .................................................................................................................................... 52

Bibliography .............................................................................................................................. 54
Introduction

As every financier knows, the liquidity is an ability of the company to generate enough cash for covering its liabilities and make investments for developing the firm’s production, technologies, conducting research and grow more cash etc. Liquidity management plays a significant role in maintaining the financial health of any firm, especially, international one. However, in comparison to popular opinions from the past, excessive cash and liquidity is not that useful for companies in a long-term. Rather, keeping the balance between short-term assets and liabilities is more profitable for the company, than creating a “cash pillow” without using the opportunity to rationally invest it.

One of the vast parts of liquidity management is a working capital management, as it defines, how to maintain the adequate level of cash and to use the resources for maximum efficiency and productivity. The working capital management is also important because it deals not only with current assets and its usage, but also with financing of the assets, the choice of which can affect significantly the liquidity of the firm.

When it comes to the financing of the assets of the company and management of its working capital, there is a lot of studies and research on this matter. This Thesis focuses on analyzing the example of the Czech branch of the multinational company, which is operating in the supply chain networks and provides a solution in a shape of pallet leasing to FMCG producers of various size around Central and Eastern Europe. The main purpose of the Thesis is to define, if the way the company researched manages its working capital is efficient and appropriate for this company by presenting financial analysis of static and dynamic measures of liquidity and working capital management. The research presents more interest also because of the fact, that as the company leases the pallets and, in case of breakage, has the policy to renovate and repair them, it maintains low inventory during the normal course of operation, and, therefore, isn’t susceptible to a risk of outdating of inventory. However, as the deliveries and
transportation are not always smooth, not all customers agree to pay on time, which creates a situation of underpayment and lowers the level of current assets.

In this regard, the first chapter of the thesis will consist of the theoretical overview of a role, which liquidity management plays in the company’s performance and provide the information on the liquidity measures. However, the chapter will be mainly focused on the working capital management as a part of liquidity management and the evolution of the ways to interpret it. The working capital management will be also considered from the point of view of multinational corporations as this corresponds also to the case of the researched company. More specifically, the multicurrency liquidity will be considered and explained. Besides, the elements of the working capital will be described in detail, as well as the ways to manage each of them. Certainly, the measures of working capital management and costs of the working capital will be researched from the different points of view.

The next part of the thesis will be devoted directly to the mentioned company and its analysis. First, the general overview of the financial state of the company during the period of 10 years will take place. Then, the analysis of liquidity and working capital management and methods which are used in this company will be described, including the analysis of trends in working capital level, specifics connected to the core business of the company, and other characteristics. All working capital measures will be calculated and analyzed, based on what the trends will be observed.

The next part will present the analysis of liquidity and working capital management policies, adopted by the considered company. Besides, a special attention will be paid to the working capital management on the multinational level. The period for analysis will be 10 years from 2006 to 2016. Besides, The Altman’s Z score will be used to estimate the probability of financial distress with the given level of investment into working capital.
1 Liquidity management and its importance in the company

1.1 Working capital elements

The picture of the working capital, whether it is being considered traditionally or in terms of the new concepts, is impossible without understanding of its basic elements. The main elements of the working capital are:

1. Cash and cash equivalents;
2. Accounts receivable;
3. Inventory;
4. Accounts payable;
5. Short-term loans.

1.1.1 Cash and cash equivalents

Cash on bank accounts and its equivalents (which can be short-term investments – investments turned to cash in one year) comprise, probably, the most active element of the working capital – the famous statement, that Cash is the King, has a meaning, that the whole life of the company depends on the ability to produce cash and the ability of company to manage them. Cash management implies the management of the cash position of the company – maintaining the positive balances through setting a target balance throughout the day. The cash management of the company includes different actions and a set of policies. For proper management of cash, the forecasting of inflows and outflows is used along with the monitoring of cash levels and flows in different branches. Usually, if the cash balances are in excess, they are used for investments and short-term sources of borrowing.
However, it would be difficult, costly and time-consuming for multinational corporations to perform such diverse set of actions in every branch separately. That is why many MNCs prefer to centralize cash management activities in a specialized hub. The cash centralization method can be performed through two different strategies – netting and cash pooling, while the latter can be notional and physical cash pooling. Cash centralization allows companies to invest the cash with higher interest and borrow with the lowest possible interest. Besides, cash centralization helps to reduce the foreign-currency risk, avoid borrowing in the countries where it’s connected to certain specifics on the financial markets, unify the reporting and maintain loyal relationship with banks.

1.1.2 Accounts receivable

The accounts receivable is comprised by credit sales, which should be collected later in time. Usually, every accounts receivable manager uses the aging schedule to evaluate, how long accounts are outstanding, how many accounts are at risk to become a dead debt and to evaluate the efficiency of the current credit terms. The accuracy and security of records should be maintained as well, same as processing and maintaining of the records should be done efficiently. After collection, the communication with treasury and cash managers should follow, so that the cash inflow is registered, recorded and used. Sometimes, companies establish their own financial subsidiary in order to manage the receivables collection more efficiently. However, to avoid the creation of uncollectible receivables, certain policies should regulate the terms and methods of its collection. The credit function should be evaluated based on the terms of credit given to customers. The methods of collection itself should be based on the business specifics and provide the fastest possible solution to the company. To evaluate the efficiency of the collection method used, the float factor can be used. Float is the amount of money in transit, thus, the float factor is the ratio between average daily float and average daily deposit, which shows, how long it takes to clear checks. The loyal relationship with customers also impacts the degree of difficulty in collecting receivables. Sometimes, to give a more loyal credit term can guarantee faster collection and better cooperation in the future.
1.1.3 Inventory

Inventory is comprised of, typically, raw materials, work-in-process (unfinished goods) and finished goods. The main goal of inventory management is to maintain such level of inventory, which is necessary to meet the demand of customers and not less or more, as lower amount of inventory exposes the company to the risk of not meeting the orders from customers and higher amount of inventory can cause risk of its obsolescence. However, there are different motives for holding inventory, such as transaction motive, precautionary motive and speculative motive. All the motives and the definition of the optimal level of inventory should be regulated by corresponding policies of the company, which should be based on the balance between costs and benefits of holding certain amount of the inventory and on the forecast of sales. Besides, policies regulate such aspects as the purchasing processes and dealing with the vendors. The monitoring of the purchasing cycle, damage control and smoothness of assembly line are also included in the regulations.

Obviously, the inventory management is not a subject of only financial manager. Asset managers, supply chain staff and pricing managers are involved. Without the cooperation of all the groups it is impossible to maintain sufficient and cheap inventory level in the company.

In order to obtain financing for the working capital, companies sometimes use asset-based financing, which is based on having inventory as a collateral for the loan. If the marketability of the inventory is high, then it is possible to get the loan on beneficial conditions.

1.1.4 Accounts payable

Accounts payable are any payments which the company owes to the vendors. It includes, besides regular payments, also such payables as salaries etc. While arranging terms of payment with the vendor it is possible to agree on credit terms. The credit terms are an equivalent of the short-term financing, which allows company not only to postpone the payment, but to arrange the cash outflows and win the time and money.
The main goal of the accounts payable management is to ensure, if the credit terms are appropriate in terms of the working capital management and if the company pays the payables on time without significant delays, which can harm the relationship with the vendors and employees and lead to higher costs in the future (legal costs, interest payments, fees etc.).

Usually, the accounts payable are managed separately by the responsible team. However, the credit terms and the costs of alternative short-term financing should be especially considered by financial managers. The credit terms are setup based on the way, how the financial function is organized and where the vendor is located. The relationship with the vendor should be especially considered.

The management of the account payables includes mainly the comparison between the actual terms of payment and the credit terms allowed by vendors. In this case, the appropriate delay in payments depends on the relationship with the vendors, float (how much money is on the way, but has not yet reached the vendor) and the type of payment.

As with any other element of the working capital management, certain policies should be established, regulating the relationship with the vendor and stating not only the allowed credit terms, but the amount and frequency of the discounts, the requirements to the processing of the invoices, emergency situations such as immediate payment and the handling of the payables activity.

### 1.2 Static measures of liquidity

Firstly, liquidity is a measure of how fast the company’s assets can be converted to cash in order to cover its liabilities. This is the one of the main indicators of the financial health of the company and an important determinant of credit solvency of the company, and, therefore, of its credit rating. High liquidity level and efficient liquidity management reduces the probability of bankruptcy for the company.
Historically, it was considered, that the more liquid assets company has, the better\(^1\). For example, in several works the standard optimal value for current ratio, which will be discussed further, is stated as 2. Alternatively, the quick ratio value, which is considered optimal, is stated as 1\(^2\). Besides, the certain theories can be found, stating the value of 2 for current ratio to be a “Rule of thumb” for liquidity. The main point of the theory is that in case the value of the assets decreases significantly, it will still be enough to cover the liabilities in full, which is, of course, a favourable situation for creditors of the company\(^3\).

However, nowadays one can’t choose certain optimal level of liquidity for the company, which it should maintain over the course of operations for long-term period of time. It is so because of several reasons: first, the company needs not only to cover its debts and costs of production, which amount is changing over year, but also conduct necessary analyses and research, invest into new projects and technologies etc.; second, the funding conditions are changing, and the interest rates may become higher during certain periods of economy, which would present complications to companies while requiring the funding; third, the situation on the market is changing constantly, and the assets which were liquid yesterday, might not be liquid tomorrow, also taking into account, that the prices of assets change rapidly. Therefore, in order to manage liquidity levels of the company efficiently, the internal and external factors should be monitored continuously and cash balances should be recalculated and invested or saved accordingly; inventory amounts should be managed carefully in order to not become obsolete and useless.


Liquidity management and its importance in the company

However, despite the liquidity of the company being dynamic, there exist several static measures, which can be used for estimating the state of company’s liquid assets at the current moment, and a more sophisticated approach, such as Cash Conversion Cycle.

First measure to consider is a current ratio, which is counted as follows:

\[
\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}
\]

It shows the extent to which company can cover its liabilities with is assets. However, it does not always purely reflect the situation which company experiences at the moment, as there is a possibility of borrowing money and investing them in short-term financial instruments, due to which the ratio would change.

Second ration is a quick – or acid-test – ratio:

\[
\text{Quick ratio} = \frac{\text{Cash + Marketable securities + Receivables}}{\text{Current Liabilities}}
\]

This indicator doesn’t use the inventory in the calculation in order to exclude the impact of possible problems which company can experience with selling of it and, therefore, to get the clearer overview.

Third ratio is a cash ratio, which includes in the calculation only the most liquid assets:

\[
\text{Cash ratio} = \frac{\text{Cash + Marketable securities}}{\text{Current liabilities}}
\]

This ratio is used for understanding, if the amounts of the most liquid assets can cover the company’s liabilities. However, if the amount of cash is lower than the amount of liabilities, it doesn’t always mean the critical situation for a firm. Rather, it is healthier for the company, as it indicates, that it is able to invest the excessive cash and in case of repayment of debts it will be able to borrow money.
Another measure is a ratio between net working capital and total assets, which helps to estimate how much of cash the company is able to obtain\(^4\). Mostly, the result is positive, but for some companies it is typical to have net working capital negative, for example, for retailers, who don’t have any inventory at all, but just resell the products.

One more ratio which deserves attention is an interval measure, or defensive internal ratio:

\[
\text{Interval Measure} = \frac{\text{Cash} + \text{Marketable securities} + \text{Receivables}}{\text{Av. daily expenditures from operations}}
\]

This ratio indicates for how long the company is capable of paying its daily expenditures only with cash it has on hands and cash from future sales, without having to recourse to non-current assets and external financing sources. This measure differs from the standard set of liquidity ratios because of comparing the assets not to liabilities, but to actual expenses, which provides to the user the overview of financial health of the company.

However, as indicated by Corey S. Cagle et al. in the article “Analyzing liquidity. Using the cash conversion cycle”, the static measures of liquidity have a lot of limitations despite being favourite among plenty of authors.

The main limitation is, that they don’t take into account the dynamics of the development of liquidity over time, as even one day can change the situation significantly. Therefore, they don’t reflect the amount of time needed to actually transform inventories into cash and to pay all outstanding liabilities. Besides, it is quite easy to manipulate with these measures and create the situation, where they would demonstrate the result completely opposite from the real liquidity state of the firm. For example, as stated in the article, it is possible to artificially increase the result of the current and quick ratios, as well as the interval measure, by prolonging the collection period of receivables. Besides, uncollectible receivables, which will never be paid out (for example, from bankrupted companies), can also inflate the current assets value and

overstate the ratio. The inventory itself, which can be a significant part of current assets, can be overstated as well due to its nature: the value of inventory grows, as it’s moving through the production process. However, it is not guaranteed, that all of its volume will be finally sold, therefore, the value of it can be easily overestimated. The inventory also consists of the reserve (inventory, unusable at the moment) and bad inventory (damaged, missing or obsolete items). The volumes of those should be written off, and in case they are not, the inventory is inflated, and, as a result, the current ratio is inflated as well.

However, these actions make the (falsely) positive change only in the current ratio measure, but doesn’t actually improve liquidity of the company, as at some moment due to not obtaining cash from sales on time company can be at risk of not covering its liabilities at the moment they are due. Besides, the company wouldn’t benefit from investing this cash and will incur the opportunity cost.

As was mentioned above, there is no simple rule to define the optimal level of liquidity, and, therefore, it is impossible to set a threshold. Nevertheless, in classic accounting it was always considered, that the higher liquidity measures are the most favourable: the range between 2 and 3 for the current ratio, 1 to 2 for the quick ratio etc. However, the interpretation of liquidity measures can’t be that univocal. It can’t be said with 100% precision, that the current or quick ratio lower than 2 indicates bad situation of liquidity, as it doesn’t take into account the strategy and type of working capital management in the company, not speaking about specifics related to industry and country where this company operates. Thus, it is one more limitation of the static liquidity measures – the ratios include cash, inventory and receivables, but from it we can’t estimate the level of managing those assets in this firm.

As liquidity management is connected to insolvency and the estimation of probability of bankruptcy, it is useful to take into account the Altman’s Z”-score model,

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which is the modification of the original Z-score model by professor Edward Altman, presented in 1993. The model differs from its previous modification and the original one by not having included the fifth variable – sales to total assets ratio – and being adjusted to the use for private companies.

\[ Z = 6,56(T1) + 3,26(T2) + 6,72(T3) + 1,05(T4), \]

where \( Z \) is overall index;

\( T1 \) is the net working capital to total assets;

\( T2 \) is the retained earnings to total assets;

\( T3 \) is EBIT to total assets;

\( T4 \) is the book value of equity to total liabilities.

According to the Altman’s theory, the potentially bankrupt firms usually have \( Z \) less than 1,10, non-bankrupt firms have \( Z \) greater than 2,60. Everything between these values is considered to be an undefined area^6.

### 1.3 Dynamic measure of liquidity – Cash Conversion Cycle

All those limitations can be addressed by the Cash Conversion Cycle method, which consists of a following equation:

\[
CCC = Days \text{ Inventory Outstanding} + Days \text{ Receivables Outstanding} - Days \text{ Payables Outstanding}
\]

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Liquidity management and its importance in the company

\[
CCC = \left[ \frac{Average\ Inventory}{\frac{Cost\ of\ Goods\ Sold}{365}} \right] + \left[ \frac{Average\ Accounts\ Receivable}{\frac{Net\ Sales}{365}} \right] - \left[ \frac{Average\ Accounts\ Payable}{\frac{Cost\ of\ Goods\ Sold}{365}} \right]
\]

As can be observed from the logic of the equation, it takes into account the time of conversion of inventory and receivables into cash and the time until the payables become paid with the cash. It appears, that the lower the number is, the shorter is the conversion cycle and, therefore, the company is in a more liquid working-capital position.

Thereby, this method also covers the difference between cash, inventory and receivables as assets in terms of their nature and liquidity. The inventory is less liquid than cash, as it takes some time to convert one into another. Same is with receivables, as the cash from sales should be obtained and it also takes time. That is the difference, which current and quick ratios don’t distinguish and don’t address in their calculation.

The views on the payables in static measures and in dynamic CCC method also differ: as the accounts payable are on the liabilities side, the static measures don’t look good, if the amount is too high. But, from the working capital management point of view, the delay in paying the accounts is a positive feature, as it provides a free credit to the company. This aspect is also taken into account in the CCC method. The longer the company defers the payment and benefits from it both financially and publicly, the better result gives the CCC equation.

Here the conclusion can be made, that the shorter cash conversion cycle is the better. However, negative values are also possible, for example, in the case of big retail chains, which don’t keep any inventories longer than their payable accounts become due.

However, the method of cash conversion cycle has certain limitations. For example, this measure can’t define the most appropriate method for inventory valuation, and, therefore, can present inaccurate results while using different methods.
As a result, it might be misleading to compare different companies by the values of CCC. Besides, there is still a room for creativity in estimating the accounts receivable, as the uncollectible receivables can still be included in the average accounts receivable part. As for the accounts payable, one can include the capital expenditures into the accounts payable part, which will artificially increase the number, and, as a result, it will present inaccurate value for CCC.

Moreover, CCC method can be useful only for companies, for which significant inventory volume is a necessary part of the business.\(^7\)

To sum up, it is almost impossible to get the full overview of the liquidity with calculating only static measures. As these measures are not designed to consider length of time, during which assets are converted into cash, they don’t provide the necessary objectivity and sometimes give misleading information. These measures take the current assets and current liabilities as of one point at the time, which also doesn’t help to consider the way working capital is managed: how fast receivables become cash, how long it takes to sell inventories or how long the accounts payable can stay outstanding. Liquidity of the company is impossible to manage without paying attention to working capital of the company and the way it is managed. The only way to consider all the aspects and estimate the liquidity position of the company is to look at static measures accompanied by the cash conversion cycle. Cash conversion cycle complements the measures and helps to define the breaches in working capital management, which are not seen by assessing only the static measures. But, even though it gives the bigger overview of company’s liquidity, this might be valid only for companies with certain amount of inventory in stock and is still vulnerable to manipulations with the presentation of all its elements.

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2 Working capital management as a part of liquidity management

As was mentioned previously, assessment of the company’s liquidity position is impossible without considering the strategies in the working capital management of this company. The formula for the net working capital is as follows:

\[
\text{Net Working Capital} = \text{Current Assets} - \text{Current Liabilities} = AAR + INV + G - AAP
\]

In this formula AAR means average accounts receivable; INV – inventory; G – cash and cash equivalents; AAP – average accounts payable. It is so due to the general idea of those two close areas: to find the optimal way of obtaining the most liquid assets. In terms of liquidity management, it is needed for covering all the liabilities and in terms of working capital management it is needed for maintaining the main operations of the firm and effective use of these liquid assets. It is necessary to say, that with too high value of the net working capital and too short cash conversion cycle the liquidity is inflated and there is too big share of it, which is not engaged into further investments. On the contrary, when the net working capital value is too low and the cash conversion cycle is, in turn, too long, it demonstrates the lack of liquidity in the company, as all the liquidity is basically tied up in the working capital elements. In order to release the liquidity from the working capital elements, which will also lead to the growth of free cash flow, all the restraining factors should be tackled.

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2.1 The evolution of the role of working capital management

However, the view on the working capital management was changing over time. This changing is parallel to that of liquidity and how the company should manage it. As of working capital management, the tendency to increase the value of the equation above also prevailed for many years. The pressure to reach higher values of working capital originates from the wish to grow the liquidity pillow, preparing for the future repayments of plenty of debts and borrowings. Banks demanded higher financial ratios to be sure of the borrowers and to be able to give them more favourable discounts, which would guarantee, that the borrowers will bring money to the bank\(^9\). This motivated companies to grow and keep as much current assets as possible. This was achieved through already mentioned ways: overstating the values of every current asset category, such as keeping obsolete or damaged inventory or stating higher value for inventory which might not be sold or keeping the uncollectible receivables on the balance sheet. These actions, in case the company will have to pay off its liabilities without any sources for that, might lead to bankruptcy, as the inventory can’t be sold with the price much higher than its cost and the significant part of receivables won’t be received.

The development of the view on working capital, after all, led to the opposite direction. The excessive working capital amounts are considered to be a burden for the company. As it appeared, liquidity pillows don’t make much sense, if there is hidden obsolete inventory, unrecoverable receivables or not invested cash. The absence of extra working capital means financial health and indicates the effective use of resources on investments and development of the technologies, research etc. The best situation to happen would be, if generated cash is used on covering the payables and other liabilities. This can be achieved by matching of payments with the receipts, which offset each other, and, as a result, the amounts of working capital are close to zero. This concept is called Zero Working Capital, and it assumes, that the company tries to

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minimize the amount of working capital to zero in order to not hold excessive cash. Similar strategy is called a Just-in-time strategy, and the companies trying to maintain it are just-in-time companies\(^{10}\).

The best example of this strategy is the Japanese car producer Toyota, which has it implemented in order to reduce the costs arisen from carrying unnecessary inventory. Just-in-time strategy means the attempt to produce the necessary units in the necessary quantities at the necessary time. This can be achieved either by implementing the strategy centrally – with populating planning schedules for each process, involved in production (also referred to as push system) – or on the decentralized basis, in which the subsequent process determines to the preceding process, how many units will be needed for current production; therefore, every process is producing only the amount which was demanded\(^{11}\).

As it’s seen from the plenty of articles, that the new view on working capital is to reduce its amount as much as possible. For example, Wayne Smith in his “4 Working Capital Performance Measures Controllers Should Calculate & Report Monthly”\(^{12}\) claims, it is critical now to reduce the investment in working capital. It can be achieved by, mainly, not keeping great volumes of inventory and not creating too big safety stocks. This also causes the decrease of associated operational costs, which usually arise from growing inventory, such as warehousing costs, repair services, insurance, etc. Besides not keeping cash in financial pillow and not risking inventories to become obsolete, the benefits are that the cash flow increases and financing requirements get reduced.

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However, this strategy can be fatal for the companies, which achieved zero working capital, in times of crisis. The prices might fall, and if the company doesn’t keep safety stocks of the not-finished goods, it would be impossible to increase sales; besides, having minimum of cash may complicate the payout of debts and payables during adverse times, when banks start to provide financing on worse conditions, than before, which altogether can lead company to financial distress. That naturally leads to the conclusion, that the working capital management has to be performed with the purpose to find the optimal volume of it.

Moreover, as Losbichler and Mahmoodi state in “Why working capital should matter to YOU”\(^\text{13}\), that the reduction of working capital became a tendency in the past few years.

Nevertheless, even though the importance of the working capital is increasing, not every company tries to make the management of the working capital a main goal and not every manager sees the connection between the working capital management and the profitability of the company and the size of its impact\(^\text{14}\).

However, as Losbichler and Mahmoodi also notice in their article, the working capital is not purely financial measure and task. It is a diverse concept, on which different teams across the company could focus. The goal is to have as low (or even negative) working capital as possible can be achieved in only in constant cooperation of supply chain management, asset management, pricing management, accounts receivable and payable management and, of course, financial management. While different departments, such as sales, have a goal to sell more, manufacturing departments have a goal to reduce unit costs and pricing departments have a goal to choose the price highest possible for the most favourable conditions for the company, all these goals can


lead to worsening working capital. For example, to sell more, salespeople can offer longer payment terms and bigger batches, what would increase receivables and provoke the inflating of inventory. For reducing unit costs large quantities are purchased, which also increases the inventory volumes. The choice of the highest possible price might be resulted in the situation, when the customers are reluctant to pay fast, which would delay receivables, there wouldn’t be enough cash to cover the debts and more inventory would remain unsold in stock. Therefore, the work of the whole company should be coordinated to achieve the optimal working capital volume and all the goals of the individual departments should be aligned to that one main goal.

The attempt to involve different managers into the working capital management process in order to impact not only one element of the working capital, but the whole business system, can be done by presenting the concept of the working capital timeline:

Figure 1. Working capital timeline

EXHIBIT 1.3 Working Capital Timeline

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As it’s seen from the figure above, the timeline suggests participation of different teams in the working capital management, as was described above. The smooth system implies, that the sales/marketing departments negotiate with the customer the amount of products and the payment terms in a favourable way, so that from the time of entering the order to receiving the payment all the actions are aligned with those of sourcing department, finance department and manufacturing department, and, as a result, the funds from customers are received at the same time (in the perfect situation) when the supplier’s invoice is due. The timeline serves as a tool for cost management, as the necessary changes should be addressed in a complex view for effective results.

The example of such complex approach is provided by J. Sagner\(^{16}\):

1. Develop a baseline for the all-in costs for the full timeline of an existing business process, such as the collection process, meaning, to create a step-by-step outline, which includes every action performed during the collection process;

2. Analyze and cost multiple scenarios for handling this process, which means to quantify different alternative algorithms for performing these actions;

3. Specify non-quantifiable factors of the process;

4. Select the most appropriate scenario, which would correspond to the lowest possible level of the costs.

The main cost elements of the working capital are a float and processing expenses.

Float is a very important notion in working capital management. Float means the funds in movement – in a process of collection or disbursement. There will be always certain amount of float in the company, but it is in the hands of managers to reduce the excessive float and maintain the necessary level of float.

\(^{16}\) See 5
Processing expenses represent transactional costs, administrative and other costs, salaries per working hour of employees, which they spend on processing any transaction. Sometimes, if part of process is outsourced, it is more possible to reduce the processing expenses. However, without well-adjusted and thought-through system there might happen, say, delay of payments or a mistake during the delivery, which could provoke the growth of processing expenses, delay in the payment receiving, and, as a result, lower profit from the operations.

One more way to consider and interpret the working capital is to “understand the working capital as the amount of the long-term capital devoted to the financing of the current assets”\(^{17}\). That means, that the equation for calculation the working capital amount would look as follows:

\[
\text{Working Capital} = \text{Long} - \text{term capital} - \text{Fixed assets}
\]

This concept leads to a different representation of the working capital – not only as operating investment of the company, but overall investment to its current assets, which already involves the capital structure into consideration. Therefore, instead of using only short-term methods, according to authors, it would be more efficient to engage long-term ways of working capital management. However, the operating investment, or Financial Needs for Operation as per this concept, is represented as cash, accounts receivable and inventories net of current liabilities. In this sense, the working capital acts as the long-term capital, used for financing the operating investment component. Certainly, if to consider the working capital from this point of view, there must appear new implications of its impact on the profitability of the company, as the only value of working capital can’t be the universal estimate for effectiveness of working capital management strategies and its impact on profitability.

\(^{17}\) See 4
2.2 Ratios overview

Besides usual liquidity measures, which are useful for working capital management, there are several activity utilization measures being used, which help to determine, if the working capital elements are improving or declining.

First type of the activity utilization measures are turnover measures:

\[
\text{Accounts Receivable Turnover} = \frac{\text{Net Credit Sales}}{\text{Average Accounts Receivable}}
\]

\[
\text{Inventory Turnover} = \frac{\text{COGS}}{\text{Average Inventory}}
\]

\[
\text{Inventory Turnover} = \frac{\text{Sales}}{\text{Average Inventory}}
\]

\[
\text{Accounts Payable Turnover} = \frac{\text{Costs of Goods Sold}}{\text{Average Accounts Payable}}
\]

The first two ratios indicate, how fast the assets are becoming real cash. For example, accounts receivable turnover shows, how efficiently company can collect the money it loans to counterparties by providing them credit on sales. The inventory turnover indicates, how many times the company manages to produce goods, sell them and obtain new inventory over a period of time. However, even though there are two approaches to calculate this ratio, the one with dividing COGS over average inventory is more accurate, since it uses in the calculation only costs, related to production and selling of this inventory. Sales usually include the markup on costs, therefore, the ratio might be higher. The AP Turnover ratio indicates, how many times per the period company has to pay off its short-term liabilities. Generally, it is considered more favourable, if the values of the first two ratios are growing in a trend, and the last one is not growing that fast.

Another type of the working capital ratios is so-called “days” or collection period in case of accounts receivable:

\[
\text{Days Receivable Outstanding} = \text{Average Collection Period} = \frac{360}{\text{AR Turnover}}
\]
Working capital management as a part of liquidity management

\[
\text{Days of Sales of Inventory} = \frac{\text{Inventory Turnover Days} \times 360}{\text{Inventory Turnover}}
\]

\[
\text{Days Payable Outstanding} = \frac{360}{\text{AP Turnover}}
\]

These measures indicate, if it took too long for the accounts receivable, accounts payable or inventory to return cash.

The Days of Sales Outstanding in AR, or Days Receivable Outstanding, indicate, how many days the potential amount of sales is trapped in accounts receivable and, therefore, indicate, how effectively company is able to collect the AR. The value would demonstrate, how often do customers ignore the credit period the company has given to them.

The Days of Sales of Inventory, or Inventory Turnover Days, must be compared to the previous years’ values to estimate the trend of how fast it took for the inventory to go through one production cycle and return cash. Generally, it helps to understand, if the company manages its inventory levels efficiently. The higher the value for both of those measures, the less effective the working capital management is, as the receivables and inventory might be high and return the cash slower.

The Days of Cost of Sales in AP, or Days Payable Outstanding, show, how many days the company is allowed to not actually pay out its payables, which indicates, how good the credit terms with the vendors are and how efficient the company manages the AP, as inflated values might mean the inability to pay the company’s obligations. All three these ratios are parts of the Cash Conversion Cycle formula.

However, according to the Wayne Smith’s article “4 Working Capital Performance Measures Controllers Should Calculate & Report Monthly”, these are among four essential ratios for controllers and managers to use for proper estimate of working capital management. The fourth equation according to authors is the amount of operating working capital as a percentage of sales, which indicates, how big is the share of working capital in sales for the period:
Operating Working Capital as a % of Sales = \frac{Operating Working Capital}{Annualized Sales}

This ratio helps to identify, what percentage of one euro from sales should go to working capital in order for the company to meet its short-term obligations.

Besides, authors state, that for companies without inventory it would be useful to calculate Days of Sales in accrued payroll and employee benefits, as in such companies it is usually the main expense.

\[
Days of Sales in Accrued Payroll and Employee Benefits = \frac{Payroll + Benefits}{Daily sales}
\]

### 2.3 Management of working capital on international basis

So far, the working capital management was considered without taking into account the company profile, its operations etc. and only general features of the working capital were observed without conclusions, related to the specifics of the business.

However, in reality companies have to face different obstacles and issues while organizing working capital management. Also, the diversity and geographical range of operations make significant impact on the working capital and its strategies. Companies, who operate on international level – multinational corporations, - have to pay very close attention to the implications it makes on the cash management. Mainly, it is so because of high costs, which are related to necessity of cooperation with the branches, banks and suppliers/vendors, located worldwide, and organizing the cash flows between them. The bigger the company, the more payments it has to execute or receive, and, therefore, it implies the generation of different costs: exchange rate transaction costs, bank fees for international transfers etc. Apart from these direct costs, the delay in receiving payments from customers and the delay in payments to vendors also create
additional problems such as the longer obtaining of cash and spoilt relationship with vendors, which, in turn, directly affects the working capital management and creates further issues such as insolvency or a lack of liquidity. Besides, the complexity of cash flows directly affects the efficiency (absence of delay in transfer of cash to branches, which are low on cash) of the cash management and might cause informational delays. Moreover, there are certain legal implications, such as low transparency in case of complex cash flow organizing.

To tackle the aforementioned troubles, two main methods may be used: decentralized or centralized cash management. In the first case, every subsidiary performs the cash management on an independent basis, and in the second case, the subsidiaries and the whole group act as one unit. The cash centralization represents the process of cash flow management, consolidated in the hands of one parent company and its bank. However, recently it became very common for multinational corporations to setup the organizations intended solely for cash centralization and other financing purposes\textsuperscript{18}. Besides simplicity, it provides for reduction of idle cash and costs connected to the bank services. After implementing the cash centralization, corporation can invest released amount of money with the higher interest rate, than as if it happened on a decentralized basis, and borrow lower amount of funds with, in turn, lower interest and more favourable borrowing conditions.

Centralized cash management can be implemented by applying two different techniques: cash pooling and netting. Cash pooling means a concentration of all the liquid funds of the company on single bank account. Netting means the process of offsetting inflows and outflows regularly (usually, daily) between the companies. In the following paragraphs those techniques will be considered in a detailed way.

\textsuperscript{18} Davydova Y., Panchvidze N. (2016). Centralized cash management: cash pooling and CEZ Group case, the research paper within the subject 1FU592 Project
2.3.1 Cash pooling

Basically, the cash pooling is a process of collecting money of the whole group from operating bank accounts on one bank account, created specifically for such purposes upon conducting the agreement – master (major) account, which is usually owned by parent company or by the company specifically created for finance services of the group. The purpose of the cash pooling is to maintain the balance positions of each of the subsidiaries of the group every day. The mentioned agreement also includes the interest rates to be used between the bank and the branches involved in the pooling and between the branches themselves. Usually the operating bank accounts are created according to the customer segments (e. g. MNE, SME, households) or individual large customers and are under single bank in the country, where the account owner is situated.

Such structure is a part of the overlay structure, which company implements in order to centralize cash in one region. Typically, the overlay structure consists of two layers, where first layer consists of local banks for usual cash transactions, necessary for operations of the branches. Second layer consists of the accounts in one global or regional bank, which are created separately for each branch and which are used for clearing the balances of the local accounts manually every day. These accounts are cleared, in turn, automatically with the master account – cash pool – every day as well. This structure allows for better overview of the positions of all branches and for the centralized cash management.
There are four methods of conducting cash pooling in the group:

1. Physical cash pooling (real or zero-balance);
2. Notional (fictive) cash pooling;
3. Multicurrency cash pooling;

Physical cash pooling, as implied from its name, is based on physical transfers of funds to and from operating accounts to master account in order to maintain zero balances on the accounts in the end of the day. The movements of balances is called sweeping. Sweeping can be upstream and downstream, which means the automatic movement of funds from the single account to the master account and the automatic transfer of funds from the master account to the single account in order to maintain the specific balance position.

---

Balance position is chosen by a group according to its needs: the balances could be zero, target, intraday and overnight. Zero balancing means maintaining zero balances on every operating account in the end of each day. Alternatively, target balancing means maintaining specific balances on the operating accounts by, first, transfer of the amounts to the master account and consequent transfers from the master account to the operating accounts for keeping the necessary balances. This type of balancing is used in the case of deficit of cash. Similar to this method, the constant balancing is used; it represents the same transfers to the master account, except that the target amount always stays on the operating accounts and, therefore, keeps the constant balance. Respectively, if the balances go lower than the constant balance, then the downstream sweeping takes place to restore it. Intraday balancing means conducting sweeping during whole day, which provides the opportunity to achieve maximum liquidity in a short time. Overnight balancing is specifically useful for MNCs, as it allows to sweep balances at the time when foreign markets are open.

Figure 3. Real cash pooling\textsuperscript{20}

\begin{center}
\begin{tikzpicture}[level distance=1.5cm,sibling distance=3.5cm,auto]
    \node {Master account \nodepart{second} 0}
    child {node {Company I. \nodepart{second} + 800} edge from parent node[above left] {Interest: \nodepart{second} +800*2\%=16}}
    child {node {Company II. \nodepart{second} - 600} edge from parent node[above right] {Interest: \nodepart{second} -600*5\%=-30}}
    child {node {Company III. \nodepart{second} + 100} edge from parent node[below] {Interest: \nodepart{second} +100*2\%=-2}}

    \node {Master account \nodepart{second} + 300} edge from parent node[above] {Credit interest = 2 \%}
    child {node {Company I. \nodepart{second} 0} edge from parent node[above left] {Debit interest = 5\%}}
    child {node {Company II. \nodepart{second} 0}}
    child {node {Company III. \nodepart{second} 0}}
\end{tikzpicture}
\end{center}

\textsuperscript{20} Polak P., Klusacek I. (2010). Centralization of Treasury Management
The advantages of centralizing cash in one region, as stated by Polak and Klusacek\textsuperscript{21} in their study “Centralization of treasury management”, are the following:

“Concentrating cash in a single region extends obvious benefits in terms of centralized decision-making, improved control over cash flows, balanced regional entities and reduced operating costs. Similarly, because each day all the surplus cash for investment is in a single location, generally treasuries experience higher yields and are also able to do cash flow forecasts more accurately, that again can extend to greater investment opportunities”.

Apart from the physical cash pooling, notional – or fictive – cash pooling is a pooling mechanism which doesn’t imply real movement of funds from one account to another. Instead, the calculation of interest on the master account takes place, based on the fictive amount of consolidated balances of all branches in the pool. Then, this interest offsets the interest, calculated based on individual balances of accounts of every branch.

In other words, the interest compensation is happening, while calculating the interest from artificially consolidated balances. First of all, the interest is calculated individually for every branch and either received or paid. As a next step, the interest from the would-be net balance of the pool is calculated in the end of the day. As a result, certain discount is calculated as a difference between the latter and former interest amounts and paid back to the group’s master account.

Besides, to exploit the surplus balances of the pool the master account is debited by the surplus amount of funds, which the company can invest later. The notional pooling mechanism has this step in common with zero-balancing physical cash pooling.

To explain the impact of the implementation of notional cash pooling mechanism, please, see below the calculation provided by P. Polak, I. Klusacek.

---

Cross-border cash pooling is a technique, specifically created for MNC’s whose branches are located in different jurisdictions with different regulations on the foreign movement of funds. In this case the pooling can be implemented on the basis of legal entity or country. First option implies sweeping of the balances from different subsidiaries to one pool in one country and transparent presentation of all the accounts. Then, the balance is swept to the central pool. This solution is appropriate in case MNC has different subsidiaries in different countries. Second option suits more to the MNC’s, which have their various subsidiaries in several countries, as the balances of single subsidiaries are swept to the pools in each country and then are swept to the central pool.

The cross-border cash pooling technique also involves different multi-levelled agreements with the banks. The banks for day-to-day operations can be chosen on the regional level, so that subsidiaries in one region use the services from one bank, and then the agreement can be concluded with the bank, offering cash pooling services, by which the balances are automatically monitored and transferred to this bank’s master account. In case of using such system of cooperation between banks, it is more achievable to reach zero balances on the accounts, than using different banks in an uncoordinated way.

---

In the sense of the cross-border sweeping of interest amounts it is important to mention the thin-capitalization rules. First countries to adopt the rules were Canada (1972), France (1979) and Australia (1980)\textsuperscript{23}. The main point of the rules is to eliminate tax avoidance, which arises from the amount of debt company has, and the outflow of companies’ profits from the state tax base. Usually, regulations allow companies to use tax deduction of the interest on the debt – to use a tax shield. The risk to misuse this benefit comes from the companies, which have the amount of debt significantly greater, than that of equity. To tackle this problem, the thin-cap rules determine the allowed threshold of the debt-to-equity ratio, which prevents the profit-shifting abroad.

Multi-currency cash pooling suggests the conversion of the balances on the accounts into one agreed currency, and the balance of the pool is calculated in this currency as well. That way, the interest is calculated based on that currency. This method is especially convenient for the companies with different accounts in different currencies.

The mixture of two latter techniques represents the scheme, in terms of which all the foreign currency accounts are based in one financial hub. This allows to achieve the merits of the centralized cash management. The cash pool then can be formed, using either real or notional cash pooling. Then, the balances are offset in multiple currencies and the net balance is calculated in the single currency. Such approach eliminates the costs and additional actions related to foreign exchange conversion.

### 2.3.2 Netting

Netting is a mechanism, implying the calculation of receivables and payables between subsidiaries of MNC and deriving the final amount, which should be paid to and by each of the subsidiaries. Also, the payments can be conducted through the centralized netting vehicle or netting centre. The main purposes of netting are to coordinate the flows of cash between companies around the globe, reduce the number

of transactions between them and, consequently, costs, achieve better control over the transactions and achieve more efficient cash management.

The company can choose between bilateral or multilateral netting. Bilateral netting implies the offsetting of the flows between each pair of subsidiaries. Multilateral netting, in turn, means the calculation of net balances and payments among different subsidiaries.

Figure 5. Bilateral and multilateral netting

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3 Working capital management – practical case

3.1 Company overview

The company chosen for the practical case was founded in 1999. It is a Czech branch of a broad European network of companies, which operates in the area of logistics, in particular, in the leasing of pallets, containers and similar handling solutions. The name of the company won’t be disclosed in this thesis, as it may contain sensitive information and will be referred as “the Company” going forward. The company applies its own technology which is called pallet pooling, by which the pallets are not accumulated at the warehouse of the company most of the time, but are constantly in use by the customers or are on the way to the customers or retailers. The system allows the Company to reduce costs for its customers, to improve the supply chain for each of the trading partners and to ensure that the customer will receive the high-quality service with maximum convenience.

The performance of the company is summarized in the following table:

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue from operations</th>
<th>Net income</th>
<th>Total assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>51085</td>
<td>-9163</td>
<td>71234</td>
</tr>
<tr>
<td>2007</td>
<td>68107</td>
<td>12284</td>
<td>98993</td>
</tr>
<tr>
<td>2008</td>
<td>97986</td>
<td>11445</td>
<td>129144</td>
</tr>
<tr>
<td>2009</td>
<td>106270</td>
<td>7556</td>
<td>128452</td>
</tr>
<tr>
<td>2010</td>
<td>102416</td>
<td>439</td>
<td>106207</td>
</tr>
<tr>
<td>2011</td>
<td>108661</td>
<td>-9189</td>
<td>114752</td>
</tr>
<tr>
<td>2012</td>
<td>133949</td>
<td>-19289</td>
<td>46301</td>
</tr>
<tr>
<td>2013</td>
<td>227532</td>
<td>7339</td>
<td>64057</td>
</tr>
<tr>
<td>2014</td>
<td>253554</td>
<td>-12280</td>
<td>85079</td>
</tr>
<tr>
<td>2015</td>
<td>247223</td>
<td>-16087</td>
<td>89239</td>
</tr>
<tr>
<td>2016</td>
<td>300127</td>
<td>1432</td>
<td>89137</td>
</tr>
</tbody>
</table>

As can be seen, the revenues demonstrate general growth all over the period, as the Company is experiencing very fast expansion on the market and manages to attract
more and more new customers. However, net income demonstrates not very successful results, which is connected with the very high expenses for returning pallets from the customers in Europe to the domestic market in the year 2006; in the years 2008-2010 the economy in the Czech Republic experienced recession due to the global financial crisis, what was reflected as well on the performance of the Company. In the years 2011-2012 the expenses connected to the reallocation of pallets back from other European countries to the domestic market again overgrew the results from the operations. However, in the year 2012 the improvement was shown, which is connected to the acquiring and cooperating with the two key market players in the area of FMCG among the clients of the Company. The years 2014 and 2015 were again marked by the higher results from export than from domestic operations, which caused significant increase of reallocation expenses. The year 2016 showed improvement mainly thanks to the strengthening of relationship with the customers, such as retailers, what could guarantee better acceptance of the Company in the future.

The total assets comprise of pallets and containers as fixed assets, which the Company provides for leasing to its customers, and which are rented from the parent company. It is important to note, that those leased pallets and containers are not accounted as inventories, because those are not produced in the premises of the Company. Even though the pallets are subject to regular checks and repairs in the shared service centres of the Company, they are still considered to be leased assets.

First of all, it would be logical to have a look at the level of working capital in the Company. The working capital level was calculated in two different ways – as a classical subtraction of current liabilities from the current assets and as a subtraction of fixed assets from the long-term capital of the Company to define, how much of the long-term capital is allocated for the financing of current assets. As the second approach implies estimating of the amount of financing for the current assets, it was decided to calculate the long-term capital with the average amount of reserves and long-term liabilities.
Table 2. Net working capital – two approaches, thousand CZK

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Working Capital (classical approach)</th>
<th>Working capital (long-term capital - fixed assets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>-14801.5</td>
<td>-30202</td>
</tr>
<tr>
<td>2007</td>
<td>3239</td>
<td>-12642.5</td>
</tr>
<tr>
<td>2008</td>
<td>-26643.5</td>
<td>-12583</td>
</tr>
<tr>
<td>2009</td>
<td>-59521.5</td>
<td>-22418</td>
</tr>
<tr>
<td>2010</td>
<td>-22791.5</td>
<td>-28488</td>
</tr>
<tr>
<td>2011</td>
<td>17949.5</td>
<td>-14142.5</td>
</tr>
<tr>
<td>2012</td>
<td>27421</td>
<td>9511</td>
</tr>
<tr>
<td>2013</td>
<td>24673</td>
<td>11352</td>
</tr>
<tr>
<td>2014</td>
<td>13818</td>
<td>3698.5</td>
</tr>
<tr>
<td>2015</td>
<td>14533.5</td>
<td>5332</td>
</tr>
<tr>
<td>2016</td>
<td>23503</td>
<td>6250</td>
</tr>
</tbody>
</table>

From the table above it is seen, that up until 2011 the Company had low amounts of working capital. In case of classical working capital measure, the change from negative to positive working capital amounts was caused by steadily growing receivables. In turn, the growing receivables doesn’t necessarily indicate the worsening receivables management in this case. Rather, it is the result of the Company’s growth and its growing popularity.

When it comes to the second approach in calculating working capital, the amounts are lower than those of classical approach in general, and it is directly connected to the great amounts of fixed assets right until 2012. However, in the following periods the working capital amounts were positive and slightly growing, which was caused by decreased fixed assets along with the long-term capital, while long-term capital still being greater than fixed assets. The fluctuations of fixed assets are connected to the fact, that Company’s fixed assets comprise mainly pallets, the volume of which depends on the orders on domestic and foreign market. The high volume means, that in the particular period the Company operates with pallets on a domestic market and manages the pallet flows between its own customers, while low volume indicates, that the Company leased the pallets to foreign entity for it to fulfill the order. These fluctuations impact the value of the net working capital, calculated by the second approach. In the case of this approach the net working capital amount depends primarily on the fixed assets than on receivables, which discovers the direct connection between
the business operations of the Company and its working capital management. The main goal of the Company is to increase the pallet flows on domestic market, in case of which the net working capital would decrease, as the fixed assets would grow.

It is important to look at the main elements of the working capital and its development. In the Table the trends in the development of each element can be observed. First of all, cash and cash equivalents demonstrated stability until 2013, when its value reached the minimum amount. It was, however, compensated by the short-term loan taken from the bank in this year. In the following years cash and its equivalents were growing. Second of all, accounts receivable were fluctuating during the period with reaching its maximum in the year 2014, which was caused by attracting new customers and expanding the portfolio of services provided to the regular customers. The inventory amounts are zero during all the period, as the Company does not produce any products. Accounts payable fluctuated significantly during the period with its maximum in the year 2009, and comprised mainly of the short-term intercompany loan, paid upon demand, which was provided to the Company in order to ensure financial safety during crisis. In the following years the value of the accounts payable decreased until 2014, when it leaped to the amount of 76075 thousand CZK, which mainly comprised of payables from operations. As was mentioned before, the short-term loans from the bank were not taken by the Company, except the year 2013, when the company didn’t possess sufficient amount of cash.

Table 3. Working capital elements, thousand CZK

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash and cash equivalents</th>
<th>Accounts Receivable</th>
<th>Inventory</th>
<th>Accounts Payable</th>
<th>Short-term loans from bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>3609</td>
<td>14167</td>
<td>0</td>
<td>21505</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>7926</td>
<td>14589</td>
<td>0</td>
<td>12308</td>
<td>0</td>
</tr>
<tr>
<td>2008</td>
<td>3512</td>
<td>23002</td>
<td>0</td>
<td>8940</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>4385</td>
<td>29090</td>
<td>0</td>
<td>89024</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>3351</td>
<td>20130</td>
<td>0</td>
<td>13515</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>4869</td>
<td>36306</td>
<td>0</td>
<td>15242</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>4427</td>
<td>41366</td>
<td>0</td>
<td>16884</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>284</td>
<td>62090</td>
<td>0</td>
<td>41937</td>
<td>637</td>
</tr>
<tr>
<td>2014</td>
<td>8119</td>
<td>75155</td>
<td>0</td>
<td>76075</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>24716</td>
<td>62463</td>
<td>0</td>
<td>65311</td>
<td>0</td>
</tr>
<tr>
<td>2016</td>
<td>19487</td>
<td>67853</td>
<td>0</td>
<td>62202</td>
<td>0</td>
</tr>
</tbody>
</table>
3.2 Liquidity ratios and CCC – analysis

First of all, the liquidity ratios will be taken into account.

Table 4. Liquidity ratios

<table>
<thead>
<tr>
<th>Year</th>
<th>Current ratio</th>
<th>Quick ratio</th>
<th>Cash ratio</th>
<th>Working capital to total assets</th>
<th>Interval ratio (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0.827</td>
<td>0.827</td>
<td>0.168</td>
<td>-0.208</td>
<td>135.990</td>
</tr>
<tr>
<td>2007</td>
<td>1.829</td>
<td>1.829</td>
<td>0.644</td>
<td>0.033</td>
<td>182.658</td>
</tr>
<tr>
<td>2008</td>
<td>2.966</td>
<td>2.966</td>
<td>0.393</td>
<td>0.108</td>
<td>161.671</td>
</tr>
<tr>
<td>2009</td>
<td>0.376</td>
<td>0.376</td>
<td>0.049</td>
<td>-0.148</td>
<td>171.071</td>
</tr>
<tr>
<td>2010</td>
<td>1.737</td>
<td>1.737</td>
<td>0.248</td>
<td>-0.215</td>
<td>100.347</td>
</tr>
<tr>
<td>2011</td>
<td>2.701</td>
<td>2.701</td>
<td>0.319</td>
<td>0.156</td>
<td>149.523</td>
</tr>
<tr>
<td>2012</td>
<td>2.712</td>
<td>2.712</td>
<td>0.262</td>
<td>0.592</td>
<td>121.262</td>
</tr>
<tr>
<td>2013</td>
<td>1.487</td>
<td>1.487</td>
<td>0.007</td>
<td>0.385</td>
<td>108.123</td>
</tr>
<tr>
<td>2014</td>
<td>1.095</td>
<td>1.095</td>
<td>0.107</td>
<td>0.162</td>
<td>119.232</td>
</tr>
<tr>
<td>2015</td>
<td>1.335</td>
<td>1.335</td>
<td>0.378</td>
<td>0.163</td>
<td>126.023</td>
</tr>
<tr>
<td>2016</td>
<td>1.404</td>
<td>1.404</td>
<td>0.313</td>
<td>0.264</td>
<td>113.265</td>
</tr>
</tbody>
</table>

As can be seen from the table above, the quick ratio equals to the current ratio, which is caused by zero inventory. The business scheme of pallet pooling, applied by the company, involves renting of pallets from one of the affiliated entities; in case the repairs of pallets are needed, they can be repaired in the shared service center of different entity. Therefore, the inventory just doesn’t exist. Basically, the Company has the products in the warehouse, but is not the owner of them.

The current ratio (and the equivalent of it in this case – quick ratio) doesn’t show any trend and fluctuates during all the period. It is connected to the general fluctuations in the amounts of current assets and current liabilities. However, the receivables showed a stable growth from 2010 to 2016 with a slight decrease in the year 2015. Generally, the ratio demonstrates “healthy” values except the year 2009, when the value approached zero, which was connected to the significant amount of payables, as described above. However, the high value of the ratio in the year 2008 is connected to remarkably low payables. The reason for low payables was that this year the Company received a long-term intercompany loan from the parent company, repaid upon demand, therefore, the liabilities to the related parties were accounted to the long-term liabilities. The high current ratio in 2011 and 2012 are connected to the activities
provided to the new customers of the Company, which triggered receivables in these years.

The cash ratio doesn’t exceed the value of 1 during all the period. The lowest value was hit in the year 2013, which is caused by very low amount of cash in this year, which can be explained by not very successful operations of the Company in this year due to economic recession in Czech Republic\textsuperscript{25}. However, the Company receives intercompany loans, both short- and long-term, on a regular basis in terms of the policy of liquidity support of the branches.

The ratio of the working capital to total assets demonstrates fluctuations. In 2009 the ratio is the lowest for all the period due to negative amount of net working capital – (-59085), which was caused by higher amounts of payables than of receivables. However, since 2011 the values for this ratio are positive with the maximum on 2012, as the net working capital reached the maximum and total assets were at their minimum at the same time. Since then, the ratio declines with slight increase in 2015. As the biggest share of the total assets of the Company is represented by the rented pallets, this ratio indicates, if the Company owns enough of current assets to cover the current liabilities not only to the third parties, but also to the related parties for the expenses connected to these leased pallets. Even though the values are low, the Company is able to cover the liabilities, as the intercompany liabilities are settled through the netting system, and third-party liabilities will be covered from the current assets, as the current ratio demonstrates above. This is the reason for such range of the values, and this range shouldn’t indicate financial instability.

The interval ratio demonstrates, that the company had sufficient amount of time to pay all its expenses with only cash and receivables on hands, as the company doesn’t own marketable securities. The minimum defensive interval equals 100 days and was hit on 2010, which is connected to receivables and cash values being lower, than previous year, while the daily expenditures from operations were stably growing during whole period. Such situation is a result of a recession in the economy of Czech Republic, \textsuperscript{25}Information is taken from the Annual report 2013.
which caused the deceleration of operations of the customers. The maximum of 182
days was reached on 2007, which is connected to quite low expenditures for the
Company in this year and, at the same time, more significant volume of cash. However,
since the year 2012 the values of the interval ratio are fluctuating around 120 days,
which generally indicates good situation for the Company, as the receivables and cash
are growing along with the expenditures. However, in 2013 the cash volume was too
low, which caused as well very low value of the interval ratio.

The cash conversion cycle values for the company deserve particular attention,
as the ratio of days inventory outstanding equals 0 for the observed company due to its
business specifics.

Table 5. Cash Conversion Cycle and its components.

<table>
<thead>
<tr>
<th>Year</th>
<th>CCC</th>
<th>Net sales</th>
<th>Costs of services provided</th>
<th>DRO</th>
<th>DPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1001.855</td>
<td>3374</td>
<td>47711</td>
<td>1249.914</td>
<td>248.059</td>
</tr>
<tr>
<td>2007</td>
<td>89.870</td>
<td>23116</td>
<td>44991</td>
<td>227.028</td>
<td>137.158</td>
</tr>
<tr>
<td>2008</td>
<td>115.159</td>
<td>38126</td>
<td>59860</td>
<td>179.939</td>
<td>64.780</td>
</tr>
<tr>
<td>2009</td>
<td>22.498</td>
<td>34847</td>
<td>71423</td>
<td>272.815</td>
<td>250.318</td>
</tr>
<tr>
<td>2010</td>
<td>309.071</td>
<td>17007</td>
<td>85409</td>
<td>528.174</td>
<td>219.103</td>
</tr>
<tr>
<td>2011</td>
<td>1211.692</td>
<td>8149</td>
<td>100512</td>
<td>1263.906</td>
<td>52.214</td>
</tr>
<tr>
<td>2012</td>
<td>-3688.405</td>
<td>-3888</td>
<td>137837</td>
<td>-3645.869</td>
<td>42.536</td>
</tr>
<tr>
<td>2013</td>
<td>1061.612</td>
<td>16970</td>
<td>210562</td>
<td>1112.594</td>
<td>50.982</td>
</tr>
<tr>
<td>2014</td>
<td>-18367.122</td>
<td>-1370</td>
<td>254924</td>
<td>-18282.637</td>
<td>84.485</td>
</tr>
<tr>
<td>2015</td>
<td>-4865.189</td>
<td>-5273</td>
<td>252496</td>
<td>-4762.997</td>
<td>102.192</td>
</tr>
<tr>
<td>2016</td>
<td>1191.095</td>
<td>18671</td>
<td>281456</td>
<td>1273.776</td>
<td>82.681</td>
</tr>
</tbody>
</table>

As can be seen from the table above, the values for the CCC experienced
significant fluctuations over the period. Mainly the reason for fluctuations were unstable
sales, as costs of services provided were steadily growing and the average receivables
showed only slight fluctuations over the period. For example, the negative amounts
being hit in 2012, 2014 and 2015 were caused not by the payables becoming due later
than the receivables becoming cash, but by negative net sales. However, the values of
CCC during the years 2007-2009 are the lowest, what was caused by higher receivables
in these years. The reason for this was that during economic recession in Czech Republic
many customers could not cover their debts in front of the Company fast enough, what
resulted into DRO adequate for favourable CCC. Therefore, the values of CCC in this year
can’t be considered as optimal for the Company. However, generally, DPO is lower than DRO all over the period, which indicates, that the Company pays faster, than receives money. This might create implications in the future and expose the Company to the risk of not covering its liabilities on time. Besides, it demonstrates not unified management of AR and AP. Especially it is seen in the years 2011, 2013 and 2016, when the values of CCC exceeded 1000.

### 3.3 Activity utilization measures – analysis

In order to obtain clearer overview of the way the Company manages the working capital and its elements, it might be useful to look closer at the activity utilization measures.

From the table above it is seen, that the Days Receivables Outstanding showed quite wide range during all the period. In the beginning of the period, in the year 2006, the measure was abnormally high due to low sales and relatively great amount of AR. However, the highest amount was reached in 2012, and the reason was the same – low sales and high AR. In general, in 5 years out of 10 the inflated values can be observed, which might evidence to us not properly set up relationship with the customers and not favourable conditions for the Company.

As was said above, the negative amounts of the DRO were caused by negative net sales in the years 2014 and 2015.

When it comes to the Days Payables Outstanding, the overall decreasing trend can be identified, which indicates, that the relationship and conditions discussed with the suppliers are adequate for the Company. Mainly, it is connected to the implementation of unified system of the payment terms, which would both satisfy the suppliers and the Company. The higher values for the measure, for example, in years 2006, 2009 and 2010, were caused by relatively high average AP in comparison to other periods, while COGS showed stable growing trend.
The turnover measures of accounts receivable and payable are introduced in the table below. The AR turnover is relatively stable and demonstrates the values from 3 to 4 except the first three years, when the net sales were growing faster than in subsequent months. However, the AR turnover ratio might seem quite low for the Company, which indicates the poor collection processes and bad credit policy. The AP turnover is not that stable as the amount of accounts payable itself fluctuated over the period. The highest values observed in the years 2012 and 2013 were caused by rapidly growing COGS and increasing average AP, which means, that the pace, with which the Company paid off its liabilities, rose as well. However, it can’t be clearly said, that both ratios are appropriate for the Company, as when the AP turnover grows, the AR turnover stays the same, which puts the Company to the position, when it pays to its creditors faster, than receives payments from debtors. It might expose the Company to the risk of not having sufficient funds for covering the liabilities.

<table>
<thead>
<tr>
<th>Year</th>
<th>AR Turnover</th>
<th>AP Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>5.648</td>
<td>1.471</td>
</tr>
<tr>
<td>2007</td>
<td>4.766</td>
<td>2.661</td>
</tr>
<tr>
<td>2008</td>
<td>5.661</td>
<td>5.634</td>
</tr>
<tr>
<td>2009</td>
<td>4.314</td>
<td>1.458</td>
</tr>
<tr>
<td>2010</td>
<td>3.797</td>
<td>1.666</td>
</tr>
<tr>
<td>2011</td>
<td>4.424</td>
<td>6.990</td>
</tr>
<tr>
<td>2012</td>
<td>3.579</td>
<td>8.581</td>
</tr>
<tr>
<td>2013</td>
<td>4.799</td>
<td>7.159</td>
</tr>
<tr>
<td>2014</td>
<td>3.885</td>
<td>4.320</td>
</tr>
<tr>
<td>2015</td>
<td>3.408</td>
<td>3.572</td>
</tr>
<tr>
<td>2016</td>
<td>4.689</td>
<td>4.415</td>
</tr>
</tbody>
</table>

One more important measure to calculate is the Operating Working Capital as the percentage of Sales.
Table 7. Operating Working Capital as a % of Sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Working Capital as a share of Sales</th>
<th>% of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>-4.387</td>
<td>-439%</td>
</tr>
<tr>
<td>2007</td>
<td>0.140</td>
<td>14%</td>
</tr>
<tr>
<td>2008</td>
<td>0.364</td>
<td>36%</td>
</tr>
<tr>
<td>2009</td>
<td>-0.545</td>
<td>-54%</td>
</tr>
<tr>
<td>2010</td>
<td>-1.340</td>
<td>-134%</td>
</tr>
<tr>
<td>2011</td>
<td>2.203</td>
<td>220%</td>
</tr>
<tr>
<td>2012</td>
<td>-7.053</td>
<td>-705%</td>
</tr>
<tr>
<td>2013</td>
<td>1.454</td>
<td>145%</td>
</tr>
<tr>
<td>2014</td>
<td>-10.086</td>
<td>-1009%</td>
</tr>
<tr>
<td>2015</td>
<td>-2.756</td>
<td>-276%</td>
</tr>
<tr>
<td>2016</td>
<td>1.259</td>
<td>126%</td>
</tr>
</tbody>
</table>

The negative values are caused by both negative sales and negative working capital amounts in different years. For example, in the years 2006, 2009-2010 these values indicated, that basically the Company didn’t require any percentage of sales to be injected in its working capital. However, as can be observed from the table above, during the years with very low or negative sales (2014 and 2015) the percentage values were inflated, and the Company required extra injection of financing to its working capital. It is not really possible to identify any stable trend; however, it might be useful to point out, that in the year 2016 the value grew from negative to 126%, which was caused by significant raise of sales since previous year.

Taking into account that company doesn’t possess any inventory, it would be interesting to calculate the Days of Sales in accrued payroll and employee benefits.
Table 8. Days of Sales in accrued payroll and benefits.

<table>
<thead>
<tr>
<th>Year</th>
<th>Days of Sales in accrued payroll and benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>646.05</td>
</tr>
<tr>
<td>2007</td>
<td>87.74</td>
</tr>
<tr>
<td>2008</td>
<td>50.54</td>
</tr>
<tr>
<td>2009</td>
<td>53.37</td>
</tr>
<tr>
<td>2010</td>
<td>103.94</td>
</tr>
<tr>
<td>2011</td>
<td>259.92</td>
</tr>
<tr>
<td>2012</td>
<td>-682.78</td>
</tr>
<tr>
<td>2013</td>
<td>202.31</td>
</tr>
<tr>
<td>2014</td>
<td>-5813.36</td>
</tr>
<tr>
<td>2015</td>
<td>-2603.73</td>
</tr>
<tr>
<td>2016</td>
<td>770.88</td>
</tr>
</tbody>
</table>

As the measure shows, how fast it takes for employees to return cash spent on their payroll and welfare, it can be seen that in 2006 the inflated value is a result of very low sales, which was the case for the Company in the beginning of its business. The payroll and benefits were confidently growing, as the number of employees was increasing over the period from 3 to 40. The inflated value in 2012 was again caused by low net sales, as the Company had to incur expenses connected to returning the exported pallets back to the domestic market. The negative values are caused by the negative net sales as a result of low revenues, which was connected to the decrease of domestic pallet flows. Even though the value for the year 2016 is the highest for the whole period, the net sales showed better result, but along with it the number of employees reached its maximum, so as the related expenses.

### 3.4 The probability of financial distress – Altman’s Z’’-score

In terms of analyzing Company’s working capital management and its efficiency it would be useful to consider the Altman’s Z’’-score, as one of the variables is represented by the ratio of working capital to total assets.
The negative values of the equation are caused by either negative net working capital, retained earnings or EBIT. According to the table above, the Company managed to score the threshold of 2,60 in the year 2013. It was caused by increased retained earnings and EBIT values and quite high working capital. The values of retained earnings and EBIT are almost the same during the whole period. The ratio between equity and total liabilities is relatively stable except the year 2014, when the equity was extremely low in comparison to the previous years. Basically, according to the Altman’s theory, the Company was close to bankruptcy for 7 years out of 10, which indicates, that the Company is exposed to risk of the financial distress. Even though the share of working capital in total assets had a tendency to increase since the year 2011, the EBIT and retained earnings are either too low or negative, which returns an unfavourable result. It is also important to notice, that the greatest weight in the Altman’s equation has the working capital to total assets ratio, which indicates, that even though the Company doesn’t have inventory, it doesn’t manage the AR and AP in an appropriate way. As was mentioned before, the collection of AP is not that successful, while the repayments of the debt have to happen on a regular basis in order to not spoil the relationship with the vendors.
3.5 Working capital management of the Company on international level

The Company is a part of centralized cash management system, which is being managed from the headquarters and controlled by the parent company. Therefore, the Global Treasury is situated in the headquarters of the Company and follows the policies, stated by the parent company. The following functions are maintained centrally in terms of the Global Treasury Function:

- The effective management of the financial risks;
- Ensuring a suitable control environment, in which risks are managed;
- The delivery of cost efficient funding and treasury-related services.

In order to maintain these functions the Group Treasury performs such activities as debt funding, the management of foreign exchange and interest rate exposures, cash management and other banking services.

The implemented Global Treasury facility allows to tackle different problems with liquidity and working capital on the local level, which represents short-term funding, as well as long-term funding, such as debt capital market issuance.

When it comes to debt funding, the Group separates the funding by the two levels – Global and Regional. Regarding the Global funding, the Group operates a central debt funding model and as a general principle, debt funding is centralized within specific financing entities. These financing entities generally fund the operating subsidiaries within the Group. The funding is provided by means of the intercompany loans.

For example, as was mentioned in the previous part, the Company receives an intercompany loan from the financing entity for the region where it operates. The amount of loan provided to the Company every year during the researched period is presented in the table below:
Table 10. Intercompany loan, thousand CZK

<table>
<thead>
<tr>
<th>Year</th>
<th>Intercompany loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>38509</td>
</tr>
<tr>
<td>2007</td>
<td>63026</td>
</tr>
<tr>
<td>2008</td>
<td>81068</td>
</tr>
<tr>
<td>2009</td>
<td>64543</td>
</tr>
<tr>
<td>2010</td>
<td>55563</td>
</tr>
<tr>
<td>2011</td>
<td>71409</td>
</tr>
<tr>
<td>2012</td>
<td>19007</td>
</tr>
<tr>
<td>2013</td>
<td>6503</td>
</tr>
<tr>
<td>2014</td>
<td>20508</td>
</tr>
<tr>
<td>2015</td>
<td>27015</td>
</tr>
<tr>
<td>2016</td>
<td>17002</td>
</tr>
</tbody>
</table>

During the period from 2006 to 2013 the loan was considered as long-term, even though these loans were provided without the maturity date and were due upon request from the creditor. However, in 2013, the reclassification of the loan from long-term loan to the short-term loan took place. It can be seen from the table, that the biggest amounts of loan were provided during the financial crisis in years 2008 and 2009, when the Company didn’t have enough funds to ensure prompt debt coverage. The loan provision also was intended to tackle the problem connected to the Cash Conversion Cycle and the Days Receivable Outstanding. The inflated value of the DRO indicated very slow collection of funds, especially unfavourable in terms of very fast repayments to the suppliers, indicated by low DPO.

As liquidity and funding is centralized in this way, it allows the Group Treasury to:

- negotiate the best possible terms and conditions for each facility;
- maintain consistency of terms across multiple facility agreements of loan provision;
- arrange funding facilities in the appropriate currencies to ensure foreign exchange exposure on quantum of facilities is minimized;
maximize the benefits of the banking relationships on a global basis, which implies lower transactional costs and higher interest on deposits;

provide an effective control environment to ensure compliance with the Group’s credit agreements.

Regarding the Regional funding, Group Treasury is supposed to coordinate the arrangements between subsidiaries. It can happen in certain circumstances, when debt may be raised at the operating subsidiary level, for example:

- working capital funding is required to manage daily liquidity;
- tax inefficiencies (e.g. withholding taxes, thin capitalization limits, tax losses) make intercompany loans costlier;
- foreign exchange or central bank regulations create legal impediments for intercompany loans or hedging intercompany loans.

In these circumstances, debt is raised at the local subsidiary level but only through the supervision of Group Treasury. Besides, loan agreements covering local facilities are generally expected to be on no more worse terms than the major credit facilities, after allowing for jurisdictional requirements. Debt funding arrangements will be supported as necessary by the following actions:

- a cross guarantee from the parent company and financing entity;
- a parent guarantee from the parent company.

As the centralized cash management implies also more efficient risk management, as it will be managed through the Global Treasury and the policies it maintains, the Group has identified the following risks as the main financial risks:

- liquidity and funding risk;
- interest risk;
- foreign exchange risk;
- financial institution counterparty credit risk;
- commodity price risk.
The first one – liquidity and funding risk – is the most relevant in terms of working capital management. The Group derives the points, which it has to cover while managing liquidity and funding risk (both short-term and long-term):

- the Group has to ensure, that each subsidiary has access to sufficient cash resources to meet its financial obligations as they fall due;
- the Group has sufficient surplus liquidity to ensure that it can meet its non-discretionary financial obligations in the event of an unforeseen change in cash requirements;
- the Group is able to provide funding in a timely and flexible manner as required for future investment and growth opportunities as they arise;
- the Group has a diversity of financing sources and maturities to manage refinancing risks, particularly in times when market conditions may be constrained.

The factors, which the Group considers while measuring liquidity risk for every subsidiary, are as follows:

- short-term financing needs and available cash and/or undrawn facilities to fund requirements including a buffer for contingency and unplanned expenditure;
- maturity profile of committed credit facilities and its future funding requirements, which the Group is involved into;
- market conditions, outlook and potential refinancing risk;
- ability to access alternative funding markets and sources of capital at competitive cost.

It is important, that the Group has a diverse portfolio of medium and long-term borrowings from various sources in order to spread the risk, along with committed credit lines and cash deposits. This would ensure the risk prevention for the Group. Besides, for funding core debt requirements, the Group implemented a strategy for diversifying the sources of funds and lengthening the terms of debt. It is achieved through
undertaking a higher proportion of debt capital market issuance relative to bank funding.

Group Treasury generally manages Group’s liquidity risk through ensuring sufficient levels of undrawn committed revolving bank credit facilities. Therefore, the focus of the Group’s methodology is based on the profile of committed credit facilities rather than debt maturities.

Group Treasury is to arrange funding to ensure committed credit facilities (including debt capital market issues) conform with the following maturity profile:

<table>
<thead>
<tr>
<th>Term to maturity</th>
<th>Profile of total committed facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum %</td>
</tr>
<tr>
<td>&lt; 12 months</td>
<td>0</td>
</tr>
<tr>
<td>&gt; 1 to 3 years</td>
<td>0</td>
</tr>
<tr>
<td>&gt;3 years</td>
<td>25</td>
</tr>
</tbody>
</table>

Besides, the following conditions should be met: no more than 30% of total committed credit facilities due greater than 12 months are to mature in each financial and calendar year period; and major bank facilities are renewed at least 6 months prior to expiry, unless being repaid or cancelled.

Besides, the Group has certain requirements regarding the diversification of the funding sources:

1. at least 35% up to a maximum of 75% of total committed facilities be sourced from debt capital markets;

2. no more than 10% of total committed facilities may be sourced from one bank.

While managing the liquidity risk from the side of funding, it is also important to pay additional attention to the cash and its equivalents, which Company owns, and ensure, that there’s no risk of potential cash deficit. To prevent that, the Group

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26 The table is based on the data from the internal documents of the Company.
introduces the liquidity buffer. It is important to know, that only cash in excess of working capital requirements can be included in the buffer.

Group Treasury is supposed to ensure at all times, that there are sufficient undrawn committed credit facilities and/or cash, including cash equivalents, available to cover the following:

- a minimum liquidity buffer of $600M to cover any contingent unforeseen or unplanned cash requirements;
- funding potential investment or growth opportunities;
- pre-funding of credit facilities and/or repayment of a non-bank debt instrument (e.g. note or bond installment, significant lease residual value, etc.) maturing within the next 12 months.

When it comes to managing the working capital through the collection of receivables, each subsidiary must seek Group Treasury and Group Finance approval prior to entering into arrangements with customers involving a third-party managed “supply chain finance” program to lengthen creditor terms, offering sales discounts to customers, securitization or factoring programs to accelerate the collection of receivables.

Use of these structures might only arise in unusual circumstances and require review by Group Treasury and Group Finance. However, even though the arrangements with customers are controlled closely by the Group Treasury, it doesn’t seem to work efficiently, as the collection of payments from customers takes too long and doesn’t allow to pay off the liabilities when they are due. Besides the contract terms and arrangements, the huge impact is caused by different business conditions, such as late pallet deliveries, missing deliveries etc., which occur due to different logistic issues and especially transportation bottlenecks in last couple of years. However, recently there were updated different terms of warning for the customer, which would include the unavailability of services of the Company, in case the payment was not made during next 15 days.
Moreover, besides the aforementioned requirements, the Group has to guarantee the maintaining of them by implementing solid reporting system, which would allow to control the processes and act quickly to solve issues and improve gaps, if any.

Speaking of the liquidity buffer, it is important to mention, that the surplus cash has to be managed carefully as well in order to not create an excessive liquidity, which causes inefficient use of funds. The Group Treasury has to take care and watch closely in order to not create a cash pile for individual subsidiaries. That is why the subsidiaries are often requested to not accumulate cash, if they are not expecting any large liabilities.

Group Treasury is responsible for managing the cash needs or cash surplus (generally cash exceeding $100M on a global basis) of the Group. Where possible, any surplus cash is to be used to retire debt. In some cases, surplus cash may need to be put on deposit until debt can be retired.

To achieve this objective, Group Treasury has established, where appropriate, cash pooling arrangements in each country and/or region²⁷. Cash pooling arrangements are structured as zero-balancing pool in which credit balances are swept to a master account (in turn, funds from the master account are transferred to debit account balances), or notional pool in which a right to offset (via a cross-guarantee) is granted to the bank who in turn applies the same interest rate to credit and debit balances.

This in turn will allow credit and debit balances to be set off for interest calculations and Group reporting purposes.

In Australia, the UK, the Netherlands, USA and Canada the cash pools are managed by Group Treasury. In other countries, the cash pools are managed by a business unit nominated by Group Treasury. The nominated business unit has responsibility for monitoring daily liquidity and liaising with Group Treasury regarding funding requirements.

²⁷ Not every country supports the transfer of funds from other countries in foreign currencies; example – Serbia.
Business units, which manage the cash pools, are responsible for advising Group Treasury of their daily and short-term cash requirements or surplus to ensure, that the Group Treasury can optimize short-term funding requirements. All surplus funds have to be remitted back to the relevant Group’s funding centre, so that external debt can be retired, or funds can be utilized elsewhere in the Group. As the share of the intercompany liabilities for the Company is quite significant due to pallet leases and corresponding expenses, it is convenient and profitable, that these liabilities are settled through netting, as it provides savings opportunities for the Company by not incurring any transactional costs or foreign exchange losses.
Conclusion

To sum up, it can be said, that the Company’s liquidity and working capital management is setup centrally through the policies and different mechanisms, implemented and controlled by the Group Treasury. For example, the funding for the Company is managed on a Global level, which implies the provision of intercompany loans by specifically established financing entity. The loans are provided yearly and are due upon request. The loans especially support the Company in the periods, when the external factors such as economic conditions influence the business operations of the Company. As a result, it is difficult to obtain cash, which threatens the liquidity situation of the Company and exposes it to the risk of financial instability. This is confirmed by the cash ratio and the cash conversion cycle.

Another mechanism introduced by the Group Treasury is a liquidity buffer. The Group maintains the liquidity buffer of $600M, which serves as a source of cash surplus, which then can be used for covering unexpected liabilities. The liquidity buffer is built up only in case the subsidiaries are in a position of cash surplus. This also ensures, that subsidiaries are not creating a cash piles, which increases opportunity costs and ties up liquidity. In case of the Company, the liquidity buffer is used in order to provide necessary liquidity to the Company and prevent it from failure to pay its obligations and to provide funding, needed for growth and development.

These mechanisms also prevent the liquidity risk, as the Group is obliged to provide the liquidity when necessary and be able to provide funding in a flexible and timely manner. That means, that the Company is able to exploit these mechanisms in the case of emergency and that the risks are being prevented centrally through the external financing and external liquidity of the parent company and Group Treasury. The Company gets such benefits as cheap financing for different purposes, which is a cost-cutting opportunity, and additional source of cash for repayment of its obligations, which protects the Company from bankruptcy.

However, in spite of the mechanisms for managing cash and liquidity, not every element of working capital is managed appropriately. In particular, it is seen on the cash
conversion cycle and the accounts receivable management. The days receivable outstanding clearly indicate, how slow the collection of receivables is happening during all the researched period, while the repayment of obligations is conducted on a significantly faster pace. Regarding the policies, implemented by Group Treasury, regulating the management of receivables, it must be agreed centrally about any initiative regarding the relationship with customers. The terms of the payment or discounts can’t be arranged if not negotiated preliminarily with the Group Treasury. However, the delays in collection of receivables still take place. It is also connected to different business issues, such as delays in the delivery of pallets, which is the most often issue. Whenever the customers experience the delay of the delivery, the payment is postponed. This situation indicates not very efficient mechanisms of accounts receivable management, which is also confirmed by the ratios calculated, such as days receivable outstanding, cash conversion cycle, accounts receivable turnover etc.

The Company participates in the Group cash pooling with a zero-balancing pool. It helps the Company to obtain the cash needed for the repayment of debts easily, as the Group transfers any surplus either to cover existing debt or to deposit it until the necessity to repay some obligations arises. Besides, while paying intercompany liability through the mechanism of netting it helps to reduce the transaction costs and eliminate the foreign exchange difference.

Overall, despite the obvious benefits from the central working capital and liquidity management, the real problem of the working capital management of the Company is the collection of receivables, which slows down the whole cycle itself. Slow collection does not allow the Company to obtain enough cash for being sure in the future repayments of its obligations. Nevertheless, the Group manages to tackle the risks of financial insolvency of all the subsidiaries, which prevents the potential default caused by the inefficient receivables management.
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