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THE EFFECTS OF WORKING CAPITAL MANAGEMENT ON THE PROFITABILITY OF DUTCH LISTED FIRMS

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"At times our own light goes out and is rekindled by a spark from another person. Each of us has cause to think with deep gratitude of those who have lighted the flame within us."

Albert Schweitzer (1875 - 1965)

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ABSTRACT

Purpose: The objective of this study is to establish the relationship between working capital management and profitability over a period of five years for Dutch Listed firms. This study investigates the effects of Working Capital Management on the profitability of Dutch listed companies. The focus in this study is on the net working capital which is according to Melrich and Leach (2009) referred as current assets less current liabilities. Even though a number of studies about Working Capital Management were undertaken in many countries around the world, the understanding about what the effects of working capital management have on the profitability is not explicit. To date there has been no study examining the Dutch Listed Firms. The focus in this study regarding the effects of working capital management on firm profitability is done by also taking in to account that each firm of a certain industry has its own way of managing working capital. This study will also give some insight how the working capital in the Netherlands is managed in order to increase profitability.

Design/methodology/approach: For this research secondary research is utilized namely the annual reports provided by Dutch Listed companies to the public. In accordance with the listed firms on Euronext the annual reports could be easily obtained from the website http://www.analist.nl/jaarverslagen where annual reports are available for the public. The focus in this research will be on all sectors with the exception of the financial institutes such as banking and finance, insurance, leasing, renting, and other service. Firms which do not have annual reports available from the year 2006 to 2010 are eliminated.

Findings: The research was conducted based on the research question: *"What is the relationship between the working capital management components and profitability within Dutch (listed) firms?"*

The findings of this study shows that there is significant and negative relationship between the profitability of Dutch listed firms and the number of days accounts payables and the number of days accounts receivables. This implies that firms which wait longer to pay their bills to suppliers and which grant a longer credit period to their customers generate less profit.

Furthermore, there is a positive and significant correlation between the profitability and the number of day's inventories which indicates that firms with high inventory levels have high profits. The study also results in a positive correlation between the profitability of firms and the cash conversions cycle. However, this finding was statistically insignificant.

Limitations: The limitation of this study is that the sample used for this research may be too small. The reason for this small sample is due to limited time and financial support. It is required to allocate a long period of time on actual sites to investigate and understand the Working Capital Management practices. Another limitation is that the percentage per industry used in the research may not be representative of the industry sectors in the Netherlands due to the unavailable data of certain years.

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1. INTRODUCTION

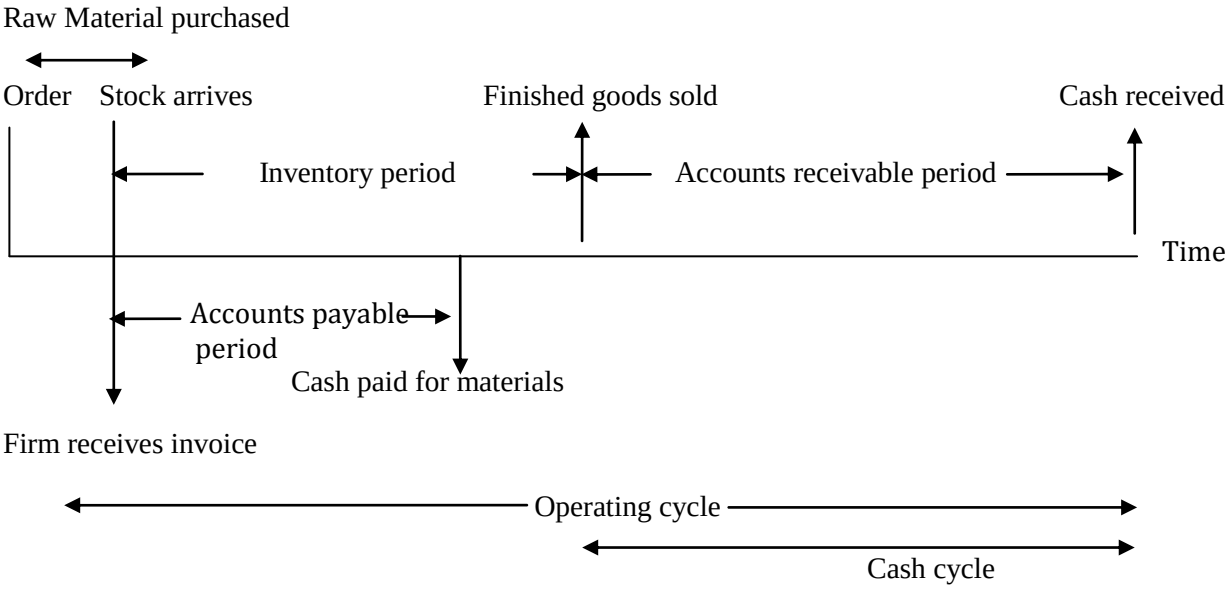
Over the years there have been numerous articles written about the importance of working capital management regarding the profitability of a firm (Shin and Soenen, 1998; Deloof, 2003; Garcia-Tereul and Martinez- Solano, 2007; Raheman and Nasr, 2007; Mathuva, 2009; Dong and Su, 2010). Various authors have conducted researches in different countries on employing working capital in an optimal way in order to pursue profitability. But some authors still have different findings on how working capital management in terms of cash conversion cycle and its components such as number of day's inventories, number of day's accounts receivable and number of days accounts payable are related to the profitability of a firm. Deloof (2003), who conducted his study on Belgian firms, suggests that working capital management has a vital effect on the profitability of a firm. He also states that firms have to make a trade-off between liquidity and profitability. Similarly, Raheman and Nasr (2007) posit that a company has to determine the equilibrium between liquidity and profitability because increasing profits at the expense of the liquidity of the firm can be harmful in terms of insolvency and bankruptcy of the firm. Accordingly, the three components of the cash conversion cycle are each managed in different ways to improve the profitability. This is due to firm specific (industry-wise) with different characteristics. Each of the researchers that have conducted case studies in different countries found different results on how the profitability of a firm is related to the cash conversion cycle and its three components. As far as is known, there has been no study on the effect of working capital on the profitability in Dutch firms. It is in this consideration that the research plan in this paper will be directed to the following research question: *"What is the relationship between the working capital management components and profitability within Dutch listed firms?"*

In the section 2 a theoretical description of the working capital management is given. Section 3 embraces the literature review of the findings of authors concerning the relationship between working capital management and profitability in firms in different countries. Subsequently section 4 explains the methodology carried out namely the data collection and the variables investigated in this research. Section 5 consists of the analysis done to investigate the effects of the working capital components on the profitability of Dutch Listed firms. And finally in section 6, conclusions are drawn from the analysis carried out in section 5.

2. WORKING CAPITAL MANAGEMENT

With working capital management is referred to the net working capital. Net working capital is current assets minus current liabilities. The net working capital is positive when current assets are greater than current liabilities (Hillier et al, 2010). Currents assets are cash and other assets that can be converted into cash within the year. Current liabilities are obligations that require cash payments within one year (Hillier et al, 2010). According to Filbeck and Krueger (2005) the objective of working capital management is to maintain the optimum balance of each of the working capital components namely receivables, inventory and payables. Some firms minimize receivables and inventories while others maximize the payables. A widely used measure of working capital management by previous studies is the Cash Conversion Cycle (CCC) (Deloof, 2003; Padachi, 2006; Garcia-Teruel and Martinez-Solano, 2007; Mathuva, 2009). Hillier et al (2010) used a framework to explain the functioning of working capital management (see figure 2.1).

Figure 2.1 Short-term operating activities and cash flows of a manufacturing firm



Source: Corporate Finance; Hillier, D., Ross, S., Westerfield, R., Jaffe, J. and Jordan, B. (2010)

The operating cycle is the period from the arrival of stock until the receipt of cash. The cash cycle begins when cash is paid for materials, and ends when cash is collected form receivables

(Hillier et al, 2010). There is a need for short-term financing when there is a gap between cash outflow (cash paid for materials) and cash inflows (cash received from receivables).

In the next section, a review of previous studies regarding the effects of working capital management on profitability is given.

3. LITERATURE REVIEW OF PREVIOUS STUDIES

In the area of corporate finance working capital plays a vital role. The reason for this is that working capital management directly affects the liquidity and profitability of a company (Raheman and Nasr, 2007). Working capital management is the management of current assets (resources in cash or easily converted into cash) and current liabilities (organizational commitments which soon require cash) (Hill et al., 2010). It is about maintaining an optimal balance between the individual working capital components: receivables, inventory and payables (Nazir and Afza, 2009). Successfully managing these components largely influences the performance of a company (Raheman et al., 2010; Filbeck and Krueger, 2005). According to Deloof (2003) efficient working capital management, trying to maintain an optimal level of working capital is a fundamental part of maximizing shareholder value. If working capital management is efficient it can ultimately increase the profitability of a company (Raheman and Nasr, 2007). Maximizing profit or shareholder value are the ultimate objectives for a company, however preserving liquidity is important too. A company needs to care about profit for their continuity, but at the same time a company needs to focus on liquidity to prevent insolvency or bankruptcy. This presents a trade-off between these two objectives, focusing on maximizing profits should not be at the cost of liquidity, and calls for effective working capital management (Raheman and Nasr, 2007). Nevertheless, the authors did not reveal what the efficient way of managing working capital is for each sector. The question of the level of efficiency rises because it is not clear what efficiency means for a company. Is it efficient to give more credit to customers and gain more sales or rather reduce the trade receivables in order to prevent a cash gap in the cash conversion cycle? Is it efficient to have higher inventories to prevent stock-out or is it efficient to keep a low level of inventories to prevent cash-lock in working capital? Is it efficient to delay the payment to suppliers or not, keeping in mind that delaying can result in damaging reputation.

According to Hill et al (2010), Nazir and Afza (2009) the optimal level of working capital is the one that ensures a balance between risk and efficiency. This requires a constant monitoring of the working capital components to maintain a suitable level. On the one hand higher sales might be generated with a large inventory and a generous trade credit, since the chance of a stock-out is

reduced and customers can assess the quality of a product before paying. On the other hand large inventories and trade credit keep cash locked up in working capital. The same dilemma counts for accounts payable. Delaying payments presents companies with a possible flexible and inexpensive source of financing, and it offers the possibility to assess the quality of the products bought (Deloof, 2003). Concerning an optimal level of working capital, Hill et al (2010) highlighted the need to consider financial characteristics besides industry affiliation when examining working capital levels for optimality. This author also did not outline what optimal management is.

In a number of studies the cash conversion cycle proves to be a popular measure of working capital management. The longer this cash conversion cycle, the bigger the amount of cash tied up in working capital. This situation can have two outcomes. It can have a positive effect on profitability if a longer cash conversion cycle leads to more sales or, it can have a negative effect on profitability if the cost of the investment in working capital rises faster than the benefits of having a large inventory or generous trade credit (Deloof, 2003).

Numerous researchers have focused on the relationship between profitability and working capital management. Most of these studies support the conclusion that there is a negative relation between profitability and working capital management measures, like the average collection period, inventory turnover in days, and cash conversion cycle. The results for the relationship between profitability and average payment period are inconclusive (Binti Mohamad and Binti Mohd Saad, 2010; Dong and Su, 2010; Garcia-Tereul and Martinez- Solano, 2007; Raheman en Nasr, 2007; Deloof, 2003; Shin and Soenen, 1998; Jose et al., 1996).

Jose et al. (1996) examined the relationship between profitability and aggressive working capital management in US companies. With the cash conversion cycle as a measure for working capital management they found a significant negative relationship between the cash conversion cycle and profitability. More precisely they found that a shorter cash conversion cycle, in other words a more aggressive style of working capital management, leads to a higher profitability.

Shin and Soenen (1998) examined the relationship between efficient working capital management and a firm's profitability using the net-trade cycle as a measure of working capital management. The relationship was examined using correlation and regression analysis, by different industries. Using a sample of 58,985 firm years covering the period 1975–1994, in all cases, the authors found a strong negative relation between the length of the firm's net-trade

cycle and its profitability. Also, a shorter net-trade cycle was associated with higher risk-adjusted stock returns.

Deloof (2003) investigated a sample of 1,009 Belgian firms and found a significant negative relation between profitability and the individual components of working capital: the number of day's accounts receivable, inventories and accounts payable. According to Deloof (2003) the negative relation between profitability and the number of day's accounts receivable and inventories suggest that managers can create shareholder value by reducing the number of days accounts receivable and inventories to an optimal minimum. The negative relation between profitability and accounts payable suggest that companies wait longer to pay their bills if they are less profitable.

Padachi (2006) conducted a study on small Mauritian manufacturing firms, during 1998 to 2003, and found that by lengthening the number of days for accounts payable the profitability can be impaired because of the implicit cost of discount for early payment to suppliers. When sales are low, firms postpone the payment to creditors in order to survive.

Using return on total assets as measure for profitability, the author found that the number of days in accounts receivable has a significant relation with return on total assets which implies that an increase of accounts receivable with one day will result in a lower profitability. Furthermore, Padachi did not find any significant coefficient between inventories and the profitability.

Lazaridis and Tryfonidis (2007) studied the relationship between profitability and working capital management of listed companies at Athens Stock Exchange. They observed that the shorter the period from production till the sales of the product is, the more profitable the firm will be**.** According to their research, less profitable firms decrease the number of days in accounts receivable in order to minimize the cash gap in the cash conversion cycle.

Too much inventory in times of low sales will lead to excessive capital usage at the expense of the firm's profitable operations.

Dong and Su (2010) investigated the relationship between the cash conversion cycle and profitability, measured through gross operating profit. Their research is based on a sample of 130 firms listed companies on the Vietnam stock market between 2006 and 2008. The cash conversion cycle has been split into the number of accounts receivable, number of day's accounts payable and the number of day's inventory. With a correlation analysis and a multiple regression analysis in which they controlled the sales, debt ratio and fixed financial assets to total

assets they conclude that there is a strong negative relationship between the number of days accounts receivable, number of days inventories and cash conversion cycle with corporate profitability. There is shown a positive relation between number of day's accounts payable and profitability. The study claimed that managers can create value for their shareholders by reducing the cash conversion cycle and those more profitable firms wait longer to pay their bills.

Gill (2010) examined 88 firms between 2005 and 2007 in the United States. Their sample was random sampled to be representative to the population. Their research has been controlled by sales, financial debt ratio and fixed financial asset ratio. With their regression analysis, they found that the relationship between cash conversion cycle and profitability is positive, which contradicts to most literature. The relationship between accounts receivables and profitability is negative. For a relationship between profitability and account payable and/or inventory no statistical evidence has been found due to poor results.

Sharma and Kumar (2011) measured the relationship between profitability and cash conversion cycle for firms in India. 263 firms in the Bombay Stock Exchange (BSE) 500 have been analyzed between 2000 and 2008. With control variables sales growth, leverage, current ratio and firm size the profitability is measured with the return on assets. They found a negative relationship between profitability and the number of days in inventory, which indicates that the less time it takes for inventory the more profit can be made due to the fact that more turnovers can be established. For the relationship between cash conversion cycle and profitability has shown to be positive agreeing with Gill (2010).

All the researchers above have investigated the effects of working capital components on the profitability of firms. To carry out a somewhat similar research but in a different country, namely the Netherlands, the following section describes the variables that will be used for the investigation and also the data sample.

4. METHODOLOGY

4.1 The Explanatory of variables

In this section the dependent, independent and control variables are pointed out which will be used in the analysis. Furthermore, the reasons for the choice of these variables are explained. The independent variable represents the value that is manipulated whereas the dependent variable represents the result of the independent variables which are manipulated. The control variables represent the variables that influence these values.

4.2 The dependent variable

The profitability is the dependent variable and will be measured by the Return on Assets (ROA). The reason for choosing this variable is that the ROA represents the ratio of how much a firm has earned on its asset base (Melicher and Leach, 2009). ROA has been used as dependent variable by Garcia-Teruel and Martinez-Solano (2007), Karaduman et al (2004), Padachi (2006), Enqvist et al (2011) and, Sharma and Kumar (2011). Consistently, the ROA will also be used in this study as dependent variable because accordingly the net profit in relation to the company asset base is a good way to measure the extent of returns on investments made in the company. The ROA will be calculated as follows:

Return on Assets = Net profit/Total Assets

4.3 The independent variables

As mentioned earlier, the Cash Conversion Cycle (CCC) will be used to measure the profitability. The reason to choose the CCC is because, according to Garcia-Tereul and Martinez- Solano (2007), the decision of how much to invest in customer and inventory accounts, and how much credit to accept from suppliers are reflected in the CCC. This measure is determined by the following equation:

Cash Conversion Cycle = Number of Days Accounts Receivables + Number of Days Inventory – Number of Days Accounts Payable

The components of the Cash Conversion Cycle are measured as follows:

Number of Days A/R = Accounts Receivables/Sales*365

Number of Days Inventory = Inventory/Cost of Goods Sold*365

Number of Days Accounts Payables = Accounts Payables/Cost of Goods Sold*365

Melicher and Leach (2009) define the Cash Conversion Cycle as the amount of time taken to buy materials and produce a finished good (the inventory-to-sale conversion period) plus the time needed to collect sales made on credit (sales-to-cash conversion period) minus the time taken to pay suppliers to pay for purchases on credit (the purchase-to-payment conversion period). The average collection period or accounts receivables period indicates how long it takes for a company to collect their money from their customers. The inventory collection period (or inventory conversion period) indicates the time of a product between entering the firm as raw materials, and the moment of selling the product. These variables will be taken from the financial statements of the different listed firms and calculated as averages over the year.

4.4 The control variables

Other variables besides the independent and the dependent variables that may influence the profitability of a firm are the control variables: the firm size, the financial debt ratio, the fixed financial asset ratio and the Annual GDP growth.

Firm Size

The size of the firm is regarded as a control variable because large companies have bargaining strength to obtain more favorable, extended credit terms from suppliers. By contrast, smaller companies may be required to pay their suppliers immediately. Another way that the size of a firm can make a difference is that bigger companies can purchase larger quantities of products. The firm size will be determined by the natural logarithm of sales. Researchers who have used this variable as control variable are: Deloof, 2003; Karaduman et al (2004); Padachi, 2006; Lazaridis and Tryfonidis (2006); Dong and Su (2010).

Fixed Financial Asset ratio

This variable is also of importance to determine the relationship between working capital and the profitability of a firm when financial assets have a part in the company's assets. It shows how the

relationship and participation of one firm to others affect the profitability. According to Deloof (2003) fixed financial assets are mainly shares in affiliated firms, intended to contribute to the activities of the firm that holds them, by establishing a lasting and specific relation and loans that were granted with the same purpose. This control variable is calculated as follows: Fixed Financial Assets / Total Assets. Other researchers who have used this control variable: Lazaridis and Tryfonidis (2006); Mathuva, 2009; Dong and Su, 2010. Being aware of the fact that banks and insurance companies are excluded in this study, the Fixed Financial Asset Ratio still is included as control variable because this variable also affects the profitability of a firm.

Financial Debt Ratio

Financial Debt Ratio (leverage) shows the how much of the firm's assets is financed by external debt. In case the financial charges due to external financing is larger than the earnings before interest and taxes, the firm can incur great losses. The Financial Debt Ratio will be calculated as follows: (Short-Term Loans + Long-Term Loans) / Total Assets. Studies in whicht this control variable is used are: Deloof, 2003; Karaduman et al (2004); Lazaridis and Tryfonidis (2006); Dong and Su, 2010. This variable is used because companies take debt from financial institutions and eventually firms have to pay the debt with interests back to them.

GDPGR

The Real GDP (Gross Domestic Product) growth rate is also relevant to firms. This is because the economic conditions of a country could be reflected in a firm's profitability. An extreme example of economic conditions is the financial crisis in 2007-2008. This control variable is also used by researchers as Mathuva (2009), Enqvist et al (2011) and Karaduman (2004). Also, the GDP controls the inflationary pressures which affect the working capital components (Mathuva, 2009).

Industry

The Industry variable is used as a dummy variable. According to the research of Weinraub and Visscher (1998) each industry has its own working capital policy. This posits that each industry might differ in how they invest in inventories and also differ in trade credit.

4.5 The hypotheses

By managing the working capital efficiently, the firm's success can be regarded as ensured whereas an inefficient management of working capital can lead to complete fiasco for the firm. According to Deloof (2003) there is a tradeoff to be made between liquidity and profitability when managing the working capital. For example, a firm with very low inventories or strict credit policies may risk losing customers. Conversely, having high inventories and too much credit extended to customers may affect the profitability of the company.

Table 1: Findings of various researchers:

	Profitability measure	Relation AR and Profitability	Relation Inv and Profitability	Relation AP and Profitability	Relation CCC and Profitability
Deloof (2003)	Gross Operating Income	Negative	Negative	Negative	Negative
Karaduman et al (2004)	Return on Assets	Negative	Negative	Negative	Negative
Lazaridis and Tryfonidis (2006)	Gross Profit	Negative	Negative	Negative	Negative
Garcia Tereul and Martinez-Solano (2007)	Return on Assets	Negative	Negative	No significant relationship	Negative
Padachi (2006)	Return on Assets	Negative	No significant relationship	Negative	Negative
Mathuva (2009)	Net Operating Profit	Negative	Positive	Positive	Negative
Nobanee et al (2009)	Return on Investment	Negative	Negative	Positive	Negative
Enqvist et al (2009)	Return on Assets; Gross Operating Income	Negative	Negative	Negative	Negative
Gill et al (2010)	Gross Profit	Negative	No significant relationship	No significant relationship	Positive
Sharma and Kumar (2011)	Return on Assets	Positive	Negative	Negative	Positive (not significant)

AR = number of days of Accounts Receivables; Inv = number of days of Inventory; AP = number of days of Accounts Payables; CCC = number of days of Cash Conversion Cycle

Rationales of deviating findings:

Relationship between number of days Accounts receivable and profitability: Most of the findings indicate that there is a) negative relationship between the number of days Accounts receivable and profitability. This implies that a longer time span for retrieving payments from customers is associated with low profits. Gill et al (2011) and Lazaridis et al (2006) for instance, rationalize their finding by stating that firms decrease the accounts receivables in order to reduce the cash gap in the cash conversion cycle. But still there exist some inconclusiveness about the findings. Sharma and Kumar (2011) who conducted their research in India found a positive relationship which implies that firms can improve the profitability by lengthening the credit period for their customers. The rationale these researchers came up with was that Indian companies grant longer credit periods in order to sustain their market and respond to competition.

Relationship between number of days Inventories and profitability: Although most researchers found a negative relationship between the number of days of inventories and the profitability, there also exists a contradictory. Mathuva (2009) found a positive relationship between the two variables mentioned above. Mathuva (2009) suggests that by having high inventory levels firms reduce bottlenecks in the production process and the loss of business due to deficiency of products. This also reduces the supply costs of products and protects the firm from possible price fluctuation due to macroeconomic factors. Whereas Garcia Teruel and Martinez-Solano (2007) state that there is a negative relationship because less profitable firms tend to keep their stocks low in times of falling sales and as a consequence declining profits.

Relationship between number of days Accounts payable and profitability: In contrast to other researchers, Mathuva (2009) and Nobanee (2009) find a positive relationship between the number of days Accounts payable and profitability. Nobanee (2009) contemplated that the reason why firms wait longer to pay the bill to suppliers is to have a better cash flow position and a higher profitability. Mathuva (2009) explained the positive relationship in two ways: 1) firms wait longer to pay their bills in order benefit from cash available for working capital needs and 2) in economic terms, longer delays in payments result in higher levels of working capital levels that can be reserved and used to increase the profitability. Sharma and Kumar (2011) revealed a negative relationship between the accounts payable and profitability and stated that the number

of days to pay bills to suppliers depends on the profitability of the firm. Less profitable firms tend to wait longer to pay their bills. This is also confirmed by Deloof (2003).

Relationship between number of days Cash Conversion Cycle and profitability: Over the years, researchers found a negative relationship between number of days Cash Conversion Cycle and profitability, but in recent years some researchers such as Sharma and Kumar (2011) and Gill et al (2010) have found in contrary a positive relationship. Their result implies that firms with shorter cash conversion cycle will generate lesser profits and vice versa. But Sharma and Kumar (2011) also state that this positive relationship is not significant. However, Gill et al (2010) found a significant positive relationship between the CCC and the profitability.

Based on the previous studies done by researchers in which they determine how the working capital components in firms affect the profitability, the following hypotheses are identified:

Hypothesis H1: The relation between profitability and the length of the cash conversion cycle is negative.

This hypothesis implies that the longer the cash conversion cycle will be the less profit the company will have. The shorter the cash conversion cycle is, the higher the profit the company will generate. Gill et al (2010) states that a long conversion cycle can increase the profitability because of the higher sales accomplished. On the other hand, the profitability can reduce due to the cash conversion cycle when the investments in working capital is higher than the benefits attained from holding more inventories and extending more trade credit to customers.

Hypothesis H2: The relation between profitability and the average collection period is negative.

This hypothesis asserts that the more credit the company extends to its customers the less profit the company will make and vice versa. Lazaridis et al (2006) concluded in their study that firms with low profits tend to decrease their accounts receivables in order to minimize the cash gap in the cash conversion cycle.

Hypothesis H3: The relation between profitability and the inventory collection period is negative.

This hypothesis denotes that the profitability of a firm will decrease if the firm invests more in, the inventories. Lazaridis and Tryfonidis (2006) found a negative relationship between number of day's inventory and profitability and they elucidate that if too much capital is tied to inventories in times of low sales the profitability of the firm will be affected.

Hypothesis H4: The relation between profitability and the average payment period is positive.

This hypothesis states that if the company lengthens the time to pay its suppliers the more profit it will make. According to Deloof (2003) accounts payable is used as a short term source of finance. The company can assess the quality of the products bought. However, with the late payment of the products the firm may miss the opportunity to gain from early payment discounts.

4.6 The data collection

The data set used in this study is obtained from the financial statements provided by Dutch firms to the public. The data consists of data of sales, payables, inventory, receivables and costs of goods sold. This data is used to calculate the inventory collection period, the receivable collection period, the payable deferral period and the cash conversion period.

The sample is based on financial statements of 70 firms that are listed in Euronext. The sample comprises of firms that operate in the Netherlands. According to Lazaridis and Tryfonidis (2006), firms that are listed in the stock market in contrary to non-listed firms, present true operational results because they intend to make their shares more attractive. However, I do not fully agree with this statement because this is not applicable to all countries. In my view, Dutch firms present their financial reports in accordance with external accountants which are accredited. Nevertheless, I continue to use Dutch Listed firms.

The focus is put on the manufacturing and the service sector. Firms in the financial sector, banking and finance, insurance, leasing, business service, renting, and other service are excluded from the sample due to their type of activity. After shedding light on this omission, I still include the financial fixed asset ratio as a control variable.

Out of 120 listed firms in the Euronext only 70 listed firms were used. In addition, some of the listed firms are not included in the sample due to the lack information during that particular

period. The annual reports for the listed firms in Euronext were derived from http://www.analist.nl/jaarverslagen. With 70 firms for the period of 2006-2010, a balanced panel set of 350 observations is retrieved.

Furthermore, the annual GDP growth rate of the Netherlands was obtained from the Statline CBS (Centraal Bureau voor de Statistiek) of the Netherlands in order to see the effect of the business cycle on the profitability of firms.

Table 2 illustrates the distribution of industries in the sample. The industry categorization is ascribed according to Euronext.

Table 2: Industry Wise Sample Distribution for the Year 2006 – 2010

Industry	Number of firms	% firms	Observations	Average CCC	Median CCC
Basic Materials	3	4.29%	15	65.88	75.08
Consumer Goods	11	15.71%	55	126.52	65.16
Consumer Services	13	18.57%	65	-157.75	16.87
Industrials	25	35.71%	125	-2.82	30.74
Health care	2	2.86%	10	-61.77	-61.77
Oil and Gas	1	1.43%	5	-63.41	-63.41
Technology	14	20.00%	70	-28.8	-20.73
Telecom	1	1.43%	5	-1421.09	-1421.09
Total	70	100.00%	350		

Source: Euronext

It is also worth mentioning that in table 2 not all industries have the appropriate percentage of representativeness due to leaving out some firms in which not all financial reports were available. For example, the sectors oil and gas and telecom only have one firm each in the sample. Therefore, there is a possibility that the results may be biased.

As stated earlier, CCC is the amount of time taken to buy materials and produce a finished good (the inventory-to-sale conversion period) plus the time needed to collect sales made on credit (sales-to-cash conversion period) minus the time taken to pay suppliers to pay for purchases on credit (the purchase-to-payment conversion period). According to Melicher and Leach (2009) it also represents the number of days the operation must be externally financed. Table 1 show that industries such as Basic Materials and Customer Goods have a positive CCC, respectively 65.88 days and 126.52 days. This means that on an average, the Basic Material Industry is externally financed for approximately 66 days and the Customer Goods Industry for approximately 127

days. The remaining industries show a negative CCC, which means that these industries collect from their customers before paying the suppliers. For example, the Customer Services Industry collect cash on an average of approximately 158 days before their suppliers are paid. This shows that each industry has its own policies in working capital management.

5. DATA ANALYSIS

5.1 The data analysis

After collecting all the data collection the data analysis is carried out. The analysis conducted on the data collected consists of the following steps:

1. ***Descriptive statistics***: The descriptive statistics describe the main features of the collected data. In the descriptive statistics a summary of the mean, median, standard deviation, the minimum and the maximum of the sample and measures will be given.
2. ***Correlation analysis***: The correlation analysis describes the relationship between variables. In this investigation of the relationship between working capital management and the profitability of a firm the Pearson correlation analysis will be used. Others that have used the Pearson correlation are researchers such as Deloof (2003), Kesseven Padachi (2006), Mathuva (2009), Gill et al (2010) and Enqvist et al (2010). Although the Pearson correlation analysis shows the relationship between the variables, it does not identify the causes from consequences (Shin and Soenen, 1998; Deloof, 2003; Mathuva, 2009; Dong and Su, 2010). The Pearson correlation does not provide a reliable indicator of association in a manner which controls for additional explanatory variables. Examining simple bivariate correlation in a conventional matrix does not take account of each variable's correlation with all other explanatory variables (Kesseven Padachi, 2006). Therefore, the next analysis (multivariate analysis) will be carried out.
3. ***Regression analysis***: A multivariate regression analysis is used in order to investigate the impact of working capital management on the profitability of firms. To conduct this analysis, the Fixed Effects Model (FEM) and the Pooled OLS regression will be used. The FEM explains the variations of profitability within firms while the pooled OLS explains the variation of profitability between firms (Mathuva, 2009). A shortcoming of FEM is that it eliminates anything that is time invariant from the model (Deloof, 2003). The variability of income, which is measured by the Return on Assets (ROA) over the 2006 - 2010 period, can therefore not be included in the Fixed Effects Model (Deloof, 2003). Hence, the OLS-models are also used, which not only include all variables of the Fixed Effects Model, but also the variability of income, 5 year dummies and 8 industry dummies. Also, another

reason to use the fixed effects model is because the sampling in this research is not random. The sampling consists of all the Dutch Listed firms on Euronext, with the exception of firms that do not have all data available.

Table 3: Panel data methodology by previous researchers

	Pooled Ordinary Least Squares (OLS)	Fixed Effects Model (FEM)
Deloof (2003)	x	x
Kesseven Pachachi (2006)	x	x
Mathuva (2009)	x	x
Dong and Su(2010)		x
Zubairi (2010)		x
Sharma and Kumar (2011)	x	

Following Deloof (2003), Kesseven Padachi (2006) and Mathuva (2009), the determinants of profitability are estimated by pooled OLS regression model. The choice of FEM models is appropriate when using focusing on a specific set of N firms and the inference is restricted to the behavior of these sets of firms (Baltagi, 2005). According to Karaduman et al (2004), if there is a correlation between the dependent variables and the unobservable heterogeneity for each firm, fixed effects method is the an appropriate choice. In my opinion, there might be a possibility of unobservable individual effects that are correlated with the dependent variable (ROA) apart from the independent variables but may not be mentioned in this research.

5.2 The descriptive statistics

Table 4 provides the descriptive statistics of the collected variables of 70 Dutch Listed firms from the year 2006 to 2010. Total observations come to 70 firms x 5 years = 350 observations.

Table 4: Descriptive statistics

Variable	Observations	Mean	St. Dev.	Min.	Max.
ROA	350	0.03791	0.1365	-10.6	0.614
AR	350	76.4473	65.1697	0.92	797.02

INV	350	82.2986	139.4977	0	1704.29
AP	350	194.5406	271.6057	0	1709.33
CCC	350	-35.7826	287.7357	-1619.1	1301.97
LOS	350	20.0233	2.2694	14.13	24.51
FFAR	350	0.03922	0.0732	0	0.4832
FDR	350	0.5863	0.1986	0.1	1.75
GDPGR	350	1.42	2.7878	-3.90	3.9

ROA = return on Assets; AR = number of days of Accounts Receivables; INV = number of days of inventories; AP = number of days of Accounts Payables; CCC = number of days of Cash Conversion Cycle; LOS = Natural Logarithm of Sales; FFAR = Fixed Financial Assets Ratio; FDR = Financial Debt Ratio; GDPGR = Gross Domestic Product growth

The interpretation of table 4 is as follows:

The credit period that firms granted their customers ranged on an average at 76 days with a standard deviation of 65 days. Minimum time that firms take to collect the receivables is 1 day and maximum 797 days. The firms themselves take an average of 195 days to pay their bills to suppliers and a standard deviation of 272 days. The inventories took an average of 82 days to be sold and a standard deviation of 139 days. Overall the Cash Conversion cycle is ranged at an average of (-) 36 days which indicates the average firm collects from their customers 36 days before paying the suppliers.

The average size of a firm is 20.02 as measured by its natural logarithm of its total turnover while the standard deviation is 2.27. The maximum value of log of sales for a company in a year is 24.51 and the minimum is 14.13. The average firm in the sample has a fixed financial ratio of 3.92%. The mean debt ratio is 58.63%. The mean growth of GDP over the 5 years is 1.42%.

5.3 The correlation analysis

Table 5: The correlation matrix

	ROA	AR	INV	AP	CCC	LOS	FFAR	FDR	GDPGR
ROA	1.0000								
AR	-0.3845*	1.0000							
INV	-0.0633	0.1096*	1.0000						
AP	-0.0908*	0.2629*	0.0973*	1.0000					
CCC	-0.0321	0.0315	0.4178*	-0.8372*	1.0000				
LOS	0.2696*	-0.2564*	-0.2505*	-0.0665	-0.1167*	1.0000			
FFAR	0.0450	-0.0447	-0.1507*	0.1160*	-0.1927*	-0.0419	1.0000		
FDR	-0.1506*	0.0388	-0.1826*	0.0056	-0.0850	0.4446*	-0.1500*	1.0000	
GDPGR	0.1080*	0.0752	0.0434	0.0201	0.0192	-0.0065	-0.0181	-0.0380	1.0000

*Correlation is significant at a 0.05 level

ROA = return on Assets; AR = number of days of Accounts Receivables; INV = number of days of inventories; AP = number of days of Accounts Payables; CCC = number of days of Cash Conversion Cycle; LOS = Natural Logarithm of Sales; FFAR = Fixed Financial Assets Ratio; FDR = Financial Debt Ratio; GDPGR = Gross Domestic Product growth

Table 5 presents the Pearson correlation coefficients for all the variables mentioned. There is a negative relation between the Return on Assets (ROA) and the working capital components (number of days accounts receivable, inventories, accounts payables and cash conversion cycle). This finding is consistent with the research of Deloof (2003) and Raheman and Nasr (2007). The result of the correlation analysis shows a significant negative coefficient (-0.3845) between Accounts Receivables and ROA. This means that if the number of days of AR increases, it will make the profitability of the company decrease.

The correlation results also indicate a negative but insignificant coefficient between inventories and ROA. This demonstrates that if firms take a long period of time to sell its inventories, the profitability will consequently decrease.

Furthermore, there is a significant coefficient (-0.0908) between AP (Accounts Payables) and ROA. A reasonable explanation according to Deloof (2003) is that firms wait too long to pay their suppliers. Early payment to suppliers might increase the profitability of the company due to large discounts for punctual payments.

The cash conversion cycle and ROA also have a negative but insignificant coefficient. This is consistent with the view that the time lag between the expenditure for the purchases of raw materials and the collection of sales of finished goods can be too long, and that decreasing this time lag increases profitability (Deloof, 2003).

The analysis also shows a significant positive correlation between natural logarithm of sales which is used to measure the size of the firm and the profitability (ROA). Its coefficient correlation is 0.2696. This shows that as size of the firm increases, it will increase its profitability and vice versa (Dong and Su, 2010).

The results show that the financial debt ratio has a significantly negative correlation (-0.1506) with the profitability, indicating that an increase in debt is associated with a decrease in the profitability. The GDP growth and the profitability have a significant positive coefficient (0.1080) which demonstrates that an increase in GDP is associated with a increase in profitability and vice versa. And finally, the FFAR (fixed financial assets ratio) has an insignificant positive correlation with ROA.

As stated earlier in paragraph 5.1, the Pearson correlation analysis shows the relationship between the variables, it does not identify the causes from consequences (Shin and Soenen, 1998; Deloof, 2003; Mathuva, 2009; Dong and Su, 2010). According to Mathuva (2009) it is hard to determine whether a shorter accounts collection period leads to higher profitability or a higher profitability is as a result of the short accounts receivable period. Hence, regression analysis is carried out in the next section to determine the impact of working capital management on corporate profitability.

5.4 The regression analysis

Consistent with the research of Mathuva (2009) and Deloof (2003), the determinants of the corporate profitability is estimated with pooled OLS. Also the fixed effects model will be used to determine the impact of the independent variables on the dependent variables. These 2 models are used for comparison purposes. Panel data methodology assumes that individuals, states, firms and countries are heterogeneous (Mathuva, 2009). Time-series and cross-section data studies in which the heterogeneity are not taken into account run the risk of getting biased results. Also, panel data give more informative data, more variability, less co linearity among the variables, more degrees of freedom and more efficiency (Baltagi, 2001).

The impact of working capital management on the profitability is modeled using the following regression equations:

ROA = f (INV, AR, AP, CCC, LOS, GDPGR, FFAR, FDR, IND, λ)

$$ROA_{it} = \beta_0 + \beta_1 INV_{it} + \beta_2 LOS_{it} + \beta_3 GDPGR_{it} + \beta_4 FFAR_{it} + \beta_5 FDR_{it} + \beta_6 IND_{it} + \beta_t \lambda_{it} + \varepsilon_i \quad \text{(Model 1)}$$

$$ROA_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 LOS_{it} + \beta_3 GDPGR_{it} + \beta_4 FFAR_{it} + \beta_5 FDR_{it} + \beta_6 IND_{it} + \beta_t \lambda_{it} + \varepsilon_i \quad \text{(Model 2)}$$

$$ROA_{it} = \beta_0 + \beta_1 AP_{it} + \beta_2 LOS_{it} + \beta_3 GDPGR_{it} + \beta_4 FFAR_{it} + \beta_5 FDR_{it} + \beta_6 IND_{it} + \beta_t \lambda_{it} + \varepsilon_i \quad \text{(Model 3)}$$

$$ROA_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 LOS_{it} + \beta_3 GDPGR_{it} + \beta_4 FFAR_{it} + \beta_5 FDR_{it} + \beta_6 IND_{it} + \beta_t \lambda_{it} + \varepsilon_i \quad \text{(Model 4)}$$

ROA measures the Return on Assets, SIZE the company size measured by the natural logarithm of Sales, GDPGR the GDP growth, FFAR the Fixed Financial Assets Ratio, the FDR the Fixed Debt Ratio, INV as the number of days of inventories, AR as the number of days of accounts receivables, AP as the number of days of accounts payables, CCC as the number of days of the cash conversion cycle, IND as the industry dummy variable and λ as the time dummy variable. The subscript i denotes firms (cross section dimensions) ranging from 1–350 and t denoting years (time-series dimension) ranging from 2006 – 2010. In all regressions, standard errors are calculated using White's correction for heteroskedasticity.

5.4.1 Pooled OLS regression

In the pooled OLS regression the 5-year dummy variables and industry dummy variables are included because these variables may have some influence on the profitability of the firm. Each of the independent variables together with all the control variables is regressed against the dependent variable separately.

In all the regression the models were tested for heteroskedacticity with the White's test. The presence of heteroskedacticity was corrected by running a robust regression. Also all the regressions are tested for multicollinearity using the variance inflaction factor (VIF). If the VIF is

more than 20 or the tolerance (1/VIF) is 0.05 or less there may be a problem with multicollinearity. The tolerance of the variables is used to determine whether the predictors have a strong linear relationship with each other (Dong and Su, 2010).

Pooled OLS regression with annual and industry dummies

The pooled OLS regressions are run on each of the variables with year dummies included to see what the results are in different time periods.

Due to 89 missing values in the data the control variable FFAR (Fixed Financial Assets Ratio) was dropped. However, it is still my opinion that the FFAR is also an important determinant of the effects of the working capital management on the profitability of firms.

Table 6: Pooled OLS regression with annual and industry dummies

		Model 1	Model 2	Model 3	Model 4
AR	Beta	-0.3008			
	Coefficient	-0.0006			
	P-value	0.058*			
	t-statistic	-1.90			
	VIF	1.11			
	1/VIF	0.8987			
INV	Beta		0.1049		
	Coefficient		0.00002		
	P-value		0.058*		
	t-statistic		1.90		
	VIF		1.08		
	1/VIF		0.9294		
AP	Beta			-0.1771	
	Coefficient			-0.00009	
	P-value			0.061*	
	t-statistic			-1.88	
	VIF			1.01	

	1/VIF			0.9936	
CCC	Beta				0.1014
	Coefficient				0.00004
	P-value				0.242
	t-statistic				1.17
	VIF				1.02
	1/VIF				0.9847
LOS	Beta	0.3197	0.4198	0.3978	0.3900
	Coefficient	0.0192	0.0196	0.0239	0.0202
	P-value	0.0000***	0.0000***	0.0000***	0.0000***
	t-statistic	5.39	5.62	4.62	5.64
	VIF	1.38	1.29	1.25	1.26
	1/VIF	0.7263	0.7723	0.7973	0.7959
FDR	Beta	-0.2811	-0.3660	-0.3293	-0.3211
	Coefficient	-0.1932	-0.1943	-0.2314	-0.1877
	P-value	0.0000***	0.0000***	0.0000***	0.0000***
	t-statistic	-5.17	-4.82	-4.59	-4.46
	VIF	1.29	1.26	1.25	1.25
	1/VIF	0.7751	0.7959	0.7998	0.8000
GDPGR	Beta	0.1171	0.2022	0.0933	0.1817
	Coefficient	0.0057	0.0076	0.0046	0.0076
	P-value	0.026**	0.0000***	0.128	0.001***
	t-statistic	2.23	3.55	1.53	3.52
	VIF	1.01	1.00	1.00	1.00
	1/VIF	0.9913	0.9968	0.9980	0.9981
Observations		350	345	350	348
R^2		0.2832	0.2715	0.2222	0.2112

*=significant at 10% level, **= significant at 5% level and ***= significant at 1% level

ROA=Return on Assets, AR= Number of days accounts receivables, INV= Number of days of inventories, AP= Number of days of accounts payables, CCC= Number of days of cash conversion cycle, LOS = Natural Logarithm of Sales, FFAR = Fixed Financial Assets Ratio, FDR = Financial Debt Ratio, GDPGR = Gross Domestic Product growth

The industry and firm year dummy variables are estimated but not reported.

The relationship between ROA and AR

With a total of 350 observations, the pooled OLS regression indicates a significant relationship between ROA and AR. Looking at the coefficient, there is a negative relationship between ROA and AR (-0.0006). The coefficients for each of the variables indicates the amount of change expected in ROA given a one-unit change in the value of that variable, given that all other variables in the model are held constant. This means, with all other variables held constant, if the AR increases by one unit (one day) then the ROA will decrease with 0.0006. This negative result is consistent with Karaduman et al (2004), Lazaridis and Tryfonidis (2006), Garcia Tereul and Martinez-Solano (2007), Padachi (2006) and Enqvist et al (2009). Thus, firms improve their profitability by reducing the credit period granted to their customers.

The relationship between ROA and INV

With a total of 345 observations, the pooled OLS regression indicates a significantly positive relationship between ROA and INV. This result is in consistent with Mathuva (2009). According to Mathuva (2009) firms keep high inventories to reduce the costs of possible interruptions in the production process and the loss of business because of scarcity of products. By maintaining high inventories firms also reduce the costs of products supply and protect the firm against price fluctuations. This result however is in contrast to other researchers (Karaduman et al, 2004; Lazaridis and Tryfonidis, 2006; Garcia Tereul and Martinez-Solano, 2007; Padachi, 2006 and Enqvist et al, 2009). These researchers state that a high inventory level is associated with a decrease in the profitability. Dong and Su (2010) state that the longer the firm takes time to sell its inventories, it will affect the profitability of the company adversely.

The relationship between ROA and AP

Looking at coefficients table 6, the relationship between ROA and AP is significant at 10% level. The coefficient is -0.00009, indicating a negative relationship between ROA and AP. This result is consistent with studies of the following researchers: Deloof, 2003; Karaduman et al, 2004; Lazaridis and Tryfonidis, 2006; Padachi, 2006; Enqvist et al, 2009 and Sharma and Kumar, 2011. The negative relationship means an increase in the number of days of accounts payables will result in a decrease of the profitability and vice versa. This is in contrast to the hypothesis in this research where a positive relationship between ROA and AP was expected. The negative relationship,

economically, would not make sense because if firms pay their bills faster there would be less reserve in the working capital to finally increase the profitability. The negative relationship is explained by Deloof (2003) indicating that less profitable firms wait longer to pay their bills.

The relationship between ROA and CCC

In model 4, the relationship between CCC and ROA is positive but statistically insignificant. This model shows the effect of all the remaining independent variables combined (AR, INV and AP) on the profitability of the firms. The positive result is in contrary with the hypothesis in which a negative relationship between CCC and ROA was expected. However, the positive relationship between these two variables is consistent with Sharma and Kumar (2011) and Gill et al (2010) who found that a longer cash conversion cycle results in an increase of the profitability. According to the results in this study, the long Cash conversion cycle may be explained by the length of number of days of accounts payables.

The relationship between ROA and the control variables

With reference to the control variables, all control variables, except for the GDPGR in model 3, are significant. The firm size was positively significant with the profitability. This means that larger firms generate higher profitability. The amount of leverage a company uses in its operations (Financial Debt Ratio) is generally negative and statistically significant which indicates that more debt results in lower profitability. However, looking at the equation of the dependent variable, which is calculated by net profit/total assets, it should also be known that in the net profit all costs including the interests costs have been deducted. Also, the GDPGR is positive and statistically significant in the models 1, 2 and 4. This indicates that the positive coefficient of the GDPGR highlights how important the economic growth is with regards to a firm's profitability.

4.5.2 The Fixed Effects Model

There are 4 regression models in which each of the four independent variables (AR, INV, AP and CCC) is regressed against the dependent variable separately. In the first regression model, the AR is regressed against the ROA. In the second regression model, the INV is regressed against ROA. In the third regression model, AP is regressed against ROA and in the fourth regression the CCC is

regressed against the ROA. In this regression, also the 89 missing values in the data of the control variable FFAR (Fixed Financial Assets Ratio) was dropped.

All the regressions were tested for heteroskedasticity using the White's test. If there is no heteroskedasticity, the test statistic will be insignificant and vice versa. The presence of heteroskedasticity is corrected with the robust regression in STATA. Also all the regressions are tested for multicollinearity using the variance inflation factor (VIF). If the VIF is more than 20 or the tolerance (1/VIF) is 0.05 or less there may be a problem with multicollinearity.

Table 7: The Fixed Effects Model with annual dummy variables

		Model 1	Model 2	Model 3	Model 4
AR	Coefficient	0.0002			
	P-value	0.057*			
	t-statistic	1.91			
INV	Coefficient		-0.00009		
	P-value		0.231		
	t-statistic		-1.20		
AP	Coefficient			0.00004	
	P-value			0.537	
	t-statistic			0.62	
CCC	Coefficient				-0.00006
	P-value				0.237
	t-statistic				-1.18
LOS	Coefficient	0.0443	0.0266	0.0239	0.0273
	P-value	0.001***	0.069*	0.009***	0.050**
	t-statistic	3.41	1.83	2.62	1.97
FDR	Coefficient	-0.1429	-0.1553	-0.1520	-0.1555
	P-value	0.004***	0.004***	0.004***	0.004***
	t-statistic	-2.90	-2.93	-2.91	-2.92
GDPGR	Coefficient	0.0067	0.0073	0.0070	0.0073
	P-value	0.000***	0.000***	0.000***	0.000***

	t-statistic	3.85	4.00	3.90	3.99
Observations		345	347	347	347
R^2		0.1972	0.1674	0.1627	0.1673

*=significant at 10% level, **= significant at 5% level and ***= significant at 1% level

ROA=Return on Assets, AR= Number of days accounts receivables, INV= Number of days of inventories, AP= Number of days of accounts payables, CCC= Number of days of cash conversion cycle, LOS = Natural Logarithm of Sales, FFAR = Fixed Financial Assets Ratio, FDR = Financial Debt Ratio, GDPGR = Gross Domestic Product growth

The year dummy variables are estimated but not reported.

The relationship between AR and ROA

Unlike the pooled OLS regression model, the FEM model regression indicates a significant positive relationship between ROA and AR at 10% level. The negative result denotes that, with all other variables held constant, if the AR increases by one unit (one day) then the ROA will increase with 0.0002. This positive result is consistent with Shankar and Kumar (2011). Shankar and Kumar (2011) posit that firms grant their customers a longer credit period to sustain in the market and respond to competition.

The relationship between ROA and INV

Table 7 indicates a negative relationship between ROA and INV but statistically insignificant. The negative result indicates that by maintaining a high inventory the profitability will be negatively affected. Nevertheless, this result is statistically insignificant.

The relationship between ROA and AP

The FEM model shows that ROA and AP have a negative but insignificant relationship. The negative relationship posits that if firms wait longer to pay their bills to suppliers the profitability will increase.

The relationship between ROA and CCC

Model 4 in the FEM regression show that the relationship between CCC and ROA is negative but statistically insignificant. The negative result denotes that a shorter cash conversion cycle results in an increase of the profitability and vice versa.

The relationship between ROA and the control variables

The FEM model presents similar results regarding the relationship between the ROA and the control variables as in the pooled OLS regression model. All the results in all 4 models are statistically significant. The GDPGR has a significant positive relationship with the profitability; the Financial Debt Ratio is negatively (significant) related with the profitability and the firm size measured by the natural logarithm of sales (LOS) is positively related with the return on assets (ROA).

Table 8: The correlation between the independent/control variables and the dependent variable

	Pooled OLS regression	Fixed Effects Model
AR	Negative and significant	Positive and significant
INV	Positive and significant	Negative and insignificant
AP	Negative and significant	Positive and insignificant
CCC	Positive and insignificant	Negative and insignificant
LOS	Positive and significant	Positive and significant
FDR	Negative and significant	Negative and significant
GDPGR	Positive and significant	Positive and significant

Source: author's computation

Even though the relationship between CCC and ROA, INV and ROA, AP and ROA are insignificant in the FEM model it still shows a contrary result in comparison to the pooled OLS regression model. The pooled OLS regression shows a positive and significant relationship between Inventories and return on assets whereas the fixed effects models shows that there is negative but insignificant relationship between these two variables. The pooled OLS regression shows a negative and significant correlation between accounts payables whereas the fixed effects model shows a positive and insignificant correlation between the variables. Moreover, the relationship between accounts receivables and the profitability in the FEM model (positive relationship) contradicts the result in the pooled OLS model which shows that there is a significant negative relationship between ROA and AR. In the pooled OLS regression there is a positive and insignificant relationship between ROA and CCC whereas the fixed effects model shows a negative and insignificant relationship between the two variables. However, it is also worth mentioning that looking at the R^2 of the models in the pooled OLS regression and the R^2 of the models in the FEM model, the R^2 in the pooled OLS regression models is higher than the R^2 in the

FEM models. The R-squared shows the fraction of variation in the dependent variable that is predicted by the independent variables. Thus the regression models explain a much higher proportion of the variations in profitability between firms (pooled OLS) than within firms (FEM), therefore only the results of the pooled OLS model are acknowledged.

6. CONCLUSION

The purpose of this research was to determine what the relationship is between the working capital management components and profitability within Dutch firms.

Based on the findings in this study, the following conclusions are derived regarding the relationship between the working capital components and the profitability of Dutch firms:

- The profitability of Dutch firms is improved when the management reduces the number of day's accounts receivables. By shortening the number of days accounts receivables cash can be generated faster in order to execute more company activities and thus increase the profitability. Consequently, firms with more profits will lead to more accounts receivables because the firms with higher profits have more cash can give more credit to their customers.
- Dutch firms hold high inventory levels in order to increase the profitability in terms of reducing the supply costs (economies of scale) and to prevent bottlenecks in the production process due to scarcity of products.
- There is a negative correlation between the firm profitability and the number of days accounts payables. This result is in theory contradictory because when firms wait longer to pay bills to suppliers they have more reserves left in the working capital with which they can execute more activities in order to increase the profitability. According to Deloof (2003), a possible explanation is that less profitable firms wait longer to pay their bills. The positive correlation is a consequence of the profitability affecting the working capital management and not vice versa.
- There is positive relationship found between the cash conversion cycle and the profitability of firms. This means that firms by shortening the cash conversion cycle the profitability of firms will decrease which is contradiction to theory. However, this positive relationship is not statistically significant meaning that there is not a clear correlation between these variables, possibly because the sample is not large enough.
- Bigger firms generate higher profits than firms. This can be explained by the economies of scale. Bigger companies have more funds to give credit to customers and have high inventories hence generate more profits.

- The negative correlation between the profitability and the debt ratio implies when the leverage in firms increase, it will have an adverse effect on the profitability of firms.
- The GDP growth in the Netherlands is positively correlated with the profitability indicating economic growth is associated with more profits.

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APPENDICES

APPENDIX 1: DATA COLLECTION

APPENDIX 1A: DATA COLLECTION FOR THE DEPENDENT AND THE INDEPENDENT VARIABLES

The data collection for each of the 70 Dutch listed firms in the Netherlands embraces the following data: net income, Total Assets, Inventories, Costs of Goods Sold (COGS), Trade Receivables, Net sales and Trade Payables. With these data the Return on Assets (ROA), the inventory-to-sale conversion period, the sales-to-cash conversion period, the purchase-to-payment conversion period and the Cash Conversion Cycle period is calculated. The net income of firms is defined as the income after all expenses, including financing costs and taxes are deducted from the revenues (Melicher and Leach, 2009). The total assets are calculated by the summation of the total liabilities plus the owners' equity. The Inventories, the Trade Receivables and the Trade Payables is derived from the balance sheets if the firms. Costs of Goods Sold are seen as the direct costs of producing a product or providing a service (Melicher and Leach, 2009). The Net sales of a firm comprises of the total revenues a firm has generated through selling its products and services.

31-12-2006

Firm	Net income	Total assets	ROA	Inventories	COGS	Inv. Conv.	Receivables	Net sales	Sale-to-cash	Payables	COGS	Purchase to pay.	CCC
Aalberts Industries N.V.	101,025	1,278,930	0.08	314,230	565,655	202.76	213,179	1,440,347	54.02	189,853	565,655	122.51	134.28
Accell Group	18,387	242,599	0.08	106,550	272,592	142.67	59,347	431,730	50.17	39,340	272,592	52.68	140.17
AHOLD KON	915,000	18,442,000	0.05	2,056,000	20,392,000	36.80	1,914,000	27,826,000	25.11	2,955,000	20,392,000	52.89	9.02
AFC AJAX	(6,626)	106,183	-0.06	787	3,502	82.03	26,388	74,430	129.41	7,403	3,502	771.59	-560.16
AKZO NOBEL	1,153,000	12,785,000	0.09	2,042,000	6,224,000	119.75	2,919,000	10,023,000	106.30	2,331,000	6,224,000	136.70	89.35
AMG	114,971	2,266,032	0.05	-	608,974	0.00	171,177	889,468	70.24	209,718	608,974	125.70	-55.45
Amsterdam Commod.	7,826,208	57,343,797	0.14	26,093,082	129,738,291	73.41	13,639,061	143,132,342	34.78	5,731,712	129,738,291	16.13	92.06
Arcadis	46,405	736,470	0.06	451	395,583	0.42	373,428	1,233,043	110.54	87,052	395,583	80.32	30.63
ASM international	34,334	845,326	0.04	197,089	538,674	133.55	198,359	877,491	82.51	99,481	538,674	67.41	148.65
ASML Holding	618,548	3,951,035	0.16	808,481	2,127,797	138.69	672,762	3,581,776	68.56	326,995	2,127,797	56.09	151.15
Balast Nedam	44	794	0.06	143	972	53.70	216	1,310	60.18	189	972	70.97	42.91
BAM Groep KON	137,636	6,404,137	0.02	1,313,165	6,365,588	75.30	2,284,668	8,646,131	96.45	3,238,528	6,365,588	185.70	-13.95
Batenburg Beheer	4,917	70,952	0.07	7,031	76,663	33.48	27,567	142,304	70.71	9,597	76,663	45.69	58.49
BE Semiconductor	10,799	314,008	0.03	58,156	116,437	182.30	36,530	191,191	69.74	15,463	116,437	48.47	203.57
Beter Bed	23,830	82,957	0.29	40,275	148,993	98.66	868	320,017	0.99	13,422	148,993	32.88	66.77
BRIL KON	2,565	35,687	0.07	9,156	8,458	395.12	8,836	25,645	125.76	11,133	8,458	480.44	40.44
Brunel Intervat	26,702	178,491	0.15	-	383,795	0.00	105,382	499,070	77.07	17,482	383,795	16.63	60.45
CSM	105	2,225	0.05	246	1,927	46.67	312	2,421	47.09	192	1,927	36.40	57.36
CTAC	2,123	19,405	0.11	-	9,944	0.00	9,679	38,120	92.68	2,858	9,944	104.90	-12.23
AND international	688	14,683	0.05	-	633	0.00	1,632	3,865	154.12	2,168	633	1250.11	-1095.99
DPA Group	(24,721)	48,080	-0.51	-	58,651	0.00	21,462	76,368	102.58	11,897	58,651	74.04	28.54
DSM KON	547	10,091	0.05	1,515	7,727	71.56	1,377	8,352	60.18	1,091	7,727	51.54	80.21
EXACT Holding	34,390	280,648	0.12	666	18,847	12.90	50,569	242,065	76.25	6,773	18,847	131.17	-42.02
Fornix Biosciences	10,929	57,056	0.19	9,490	6,774	511.34	10,954	34,798	114.90	7,202	6,774	388.06	238.18
GRONTMIJ	22,053	533,810	0.04	-	158,612	0.00	140,389	533,876	95.98	37,290	158,612	85.81	10.17
HEIMANS	82,540	2,129,877	0.04	639,809	2,702,673	86.41	665,748	2,942,078	82.59	722,376	2,702,673	97.56	71.44
HEINEKEN	1,345	12,997	0.10	893	7,376	44.19	1,917	11,829	59.15	2,496	7,376	123.51	-20.17
HES BEHEER	8,845	84,931.00	0.10	274	16,056	6.23	8,565	63,212	49.46	6,829	16,056	155.24	-99.56
HITT	1,850	27,788	0.07	237	7,770	11.13	14,186	27,875	185.75	7,791	7,770	365.99	-169.10
HOLLAND COLOURS	1,998	47,472	0.04	9,375	32,509	105.26	9,400	62,582	54.82	7,439	32,509	83.52	76.56
ICT Automatisering	6,212	57,357	0.11	-	8,978	0.00	24,555	80,663	111.11	2,891	8,978	117.53	-6.42
IMTECH	69,065	1,576,846	0.04	62,643	1,013,272	22.57	743,134	2,838,910	95.55	713,194	1,013,272	256.91	-138.80
KENDRION	14	292	0.05	75	353	77.35	100	569	64.40	98	353	101.48	40.27
KPN	1,583	21,258	0.07	113	900	45.83	2,138	12,057	64.72	2,936	900	1190.71	-1080.16

MACINTOSH Retail	42,209	272,191	0.16	152,545	569,306	97.80	35,078	983,838	13.01	94,841	569,306	60.81	50.01
MEDIQ	102,533	1,050,848	0.10	196,056	1,832,777	39.04	242,524	2,281,042	38.81	310,762	1,832,777	61.89	15.96
NEDAP	12,424	102,061	0.12	20,198	52,386	140.73	29,572	138,509	77.93	17,799	52,386	124.01	94.64
NUTRECO	521	1,799	0.29	189	2,299	29.97	437	3,009	52.99	605	2,299	95.97	-13.01
Neways Electronics	11,154	105,752	0.11	47,847	140,936	123.92	44,133	238,632	67.50	44,845	140,936	116.14	75.28
OCE	57,123	2,605,670	0.02	340,423	18,411,710	6.75	936,929	3,110,323	109.95	590,885	1,841,170	117.14	-0.44
OCTOPLUS	(8,665)	32,666	-0.27	498	2,108	86.23	1,139	6,051	68.71	2,468	2,108	427.33	-272.40
Oranjewoud A	11,466,509	144,363,468	0.08	-	45,809,263	0.00	67,295,190	120,962,810	203.06	15,196,664	45,809,263	121.08	81.98
ORDINA	25,828	457,037	0.06	103	87,544	0.43	142,414	530,411	98.00	149,120	87,544	621.73	-523.30
Philips	5,381	38,497	0.14	2,880	18,435	57.02	4,773	26,682	65.29	3,179	18,435	62.94	59.37
Porceleyne Fles	13	4,095	0.00	1,751	541	1181.36	213	4,137	18.79	332	541	223.99	976.16
PUNCH Graphix	(2,976)	52,986	-0.06	11,882	20,663	209.89	8,209	35,465	84.49	7,411	20,663	130.91	163.46
Qurius	3,201	87,767	0.04	-	12,962	0.00	22,252	41,859	194.03	10,665	12,962	300.32	-106.29
Randstad	360	2,578	0.14	-	6,456	0.00	1,443	8,186	64.34	1,096	6,456	61.95	2.39
ROODMICROTEC	141	11,174	0.01	146	924	57.67	1,956	8,892	80.29	860	924	339.72	-201.76
REED Elsevier	625	8,532	0.07	633	1,983	116.51	1,443	5,398	97.57	1,934	1,983	355.98	-141.90
ROTO SMEETS	7,318	325,517	0.02	9,108	236,931	14.03	90,363	531,258	62.08	61,599	236,931	94.90	-18.78
SBM OFFSHORE	216,339	2,940,336	0.07	15,314	1,619,531	3.45	324,117	1,989,689	59.46	720,139	1,619,531	162.30	-99.39
SIMAC Techniek	490	62,830	0.01	9,473	64,848	53.32	27,689	131,294	76.98	24,877	64,848	140.02	-9.73
SLIGRO FOOD GROUP	62,079	719,266	0.09	150,379	1,301,883	42.16	82,940	1,661,175	18.22	81,048	1,301,883	22.72	37.66
STERN GROEP	12,607	407,885	0.03	130,775	618,315	77.20	22,862	756,194	11.04	18,082	618,315	10.67	77.56
SWEDISH AUTOMOBILE	828	186,044	0.00	17,264	19,368	325.35	35,847	19,692	664.44	41,282	19,068	790.22	199.57
TELEGRAAF MEDIA GR	49,181	1,042,573	0.05	11,069	69,135	58.44	130,786	790,498	60.39	213,110	69,135	1125.12	-1006.29
TEN CATE	76	489	0.16	158	402	143.11	109	771	51.64	103	402	93.56	101.19
TIE Holding	1,041	9,555	0.11	-	984	0.00	1,564	8,434	67.69	786	984	291.55	-223.87
TKH Group	35,366	476,767	0.07	119,750	421,109	103.79	155,921	685,492	83.02	171,302	421,109	148.48	38.34
TOMTOM	222,181	902,968	0.25	123,005	785,131	57.18	265,990	1,363,758	71.19	66,744	785,131	31.03	97.35
Unilever	5,015	23,188	0.22	3,796	34,234	40.47	4,254	39,642	39.17	7,838	34,234	83.57	-3.93
UNIT4	18,432	379,006	0.05	755	24,132	11.42	67,998	230,742	107.56	20,613	24,132	311.77	-192.79
USG People	111,282	1,899,782	0.06	-	2,690,045	0.00	769,879	3,536,836	79.45	570,090	2,690,045	77.35	2.10
VOPAK	147	1,821	0.08	-	240	0.00	184	781	86.14	227	240	345.37	-259.24
WAVIN	73,416	1,464,181	0.05	200,591	1,092,335	67.03	327,764	1,501,490	79.68	358,912	1,092,335	119.93	26.77
Wegener	15,614	775,830	0.02	3,205	70,039	16.70	84,351	668,055	46.09	34,361	70,039	179.07	-116.28
WESSANEN KON	34	951	0.04	190	1,069	64.83	182	1,597	41.57	134	1,069	45.89	60.52
WITTE MOLEN	361	22,966	0.02	7,127	63,624	40.89	8,786	71,930	44.58	7,041	63,624	40.39	45.08
WOLTERS KLUWER	322	2,819	0.11	134	1,383	35.37	973	3,693	96.17	420	1,383	110.85	20.69

31-12-2007													
Firm	**Net income**	**Total assets**	**ROA**	**Inventories**	**COGS**	**Inv. Conv.**	**Receivables**	**Net sales**	**Sale-to-cash**	**Payables**	**COGS**	**Purchase to pay.**	**CCC**
Aalberts Industries N.V.	120,031	1,434,495	0.084	328,142	723,763	165.48	205,425	1,702,523	44.04	190,303	723,763	95.97	113.55
Accell Group	19,814	277,631	0.071	119,247	296,531	146.78	69,863	473,073	53.90	36,622.00	296,531.00	45.08	155.61
AHOLD KON	2,945,000	13,944,000	0.211	1,263,000	18,033,000	25.56	941,000	24,893,000	13.80	2,240,000	18,033,000	45.34	-5.98
AFC AJAX	(10,420)	92,481	-0.113	763	3,439	80.98	15,789	64,891	88.81	5,542	3,439.00	588.20	-418.41
AKZO NOBEL	9,330,000	19,243,000	0.485	1,177,000	6,252,000	68.71	2,164,000	10,217,000	77.31	1,998,000	6,252,000.00	116.65	29.38
AMG	5,509	609,652	0.009	126,759	648,876	71.30	127,325	785,848	59.14	86242.36	648,876	48.51	81.93
Amsterdam Commod.	8,833,606	66,279,458	0.133	33,138,288	142,588,698	84.83	14,701,886	161,863,325	33.15	6,707,860	142,588,698	17.17	100.81
Arcadis	57,498	921,673	0.062	676	505,785	0.49	464,844	1,510,238	112.35	119,538.00	505,785.00	86.26	26.57
ASM international	60,977	840,333	0.073	205,504	594,163	126.24	229,160	955,239	87.56	99,046	594,163	60.84	152.96
ASML Holding	671,001	4,073,128	0.165	1,102,210	2,218,526	181.34	637,975	3,768,185	61.80	282,953	2,218,526	46.55	196.58
Balast Nedam	27	898	0.030	179	923	70.79	285	1,270	81.91	211	923.00	83.44	69.26
BAM Groep KON	270,291	6,985,472	0.039	1,671,386	6,270,949	97.28	2,401,988	8,538,555	102.68	3,299,712	6,270,949	192.06	7.90
Batenburg Beheer	5,551	75,199	0.074	11,737	79,053	54.19	26,753	144,105	67.76	12,449	79,053	57.48	64.47
BE Semiconductor	(5,496)	285,005	-0.02	46,824	108,492	157.53	41,738	166,471	91.51	13,724	108,492.00	46.17	202.87
Beter Bed	27,572	95,160	0.29	49,763	162,430	111.82	921	351,171	0.96	10,546	162,430	23.70	89.08
BRIL KON	2,998	36,960	0.081	10,293	8,733	430.20	8,125	25,883	114.58	11,644	8,733.00	486.67	58.11
Brunel Intervat	36,912	197,873	0.187	-	443,583	0.00	111,707	579,889	70.31	12,994	443,583	10.69	59.62
CSM	203	2,048	0.099	256	2,062	45.34	326	2,486	47.81	227.6	2,062	40.29	52.86
CTAC	2,565	45,781	0.056	-	11,157	0.00	17,438	50,300	126.54	5,060	11,157.00	165.54	-39.00
AND international	1,219	16,899	0.072	-	5,322	0.00	1,211	4,680	94.45	2,242	5,322	153.76	-59.32
DPA Group	(192)	65,513	0.00	-	60,636	0.00	22,072	84,322	95.54	15,173	60,636.00	91.33	4.21
DSM KON	434	9,828	0.044	1,547	8,098	69.73	1,452	8,757	60.52	1,124	8,098.00	50.66	79.59
EXACT Holding	39,112	275,024	0.142	627	18,556	12.33	53,122	252,109	76.91	6178	18,847.00	119.65	-30.40
Fornix Biosciences	13,981	59,187	0.236	3,347	6,607	184.90	6,537	38,093	62.64	2,475	6,607.00	136.73	110.81
GRONTMIJ	32,720	596,519	0.055	-	174,701	0.00	313,291	798,011	143.30	291,364	174,701.00	608.74	-465.45
HEIMANS	56,427	2,205,067	0.026	534,865	3,484,094	56.03	670,158	3,431,854	71.28	840,833	3,484,094.00	88.09	39.22
HEINEKEN	929	11,954	0.078	883	7,320	44.03	1,769	11,245	57.42	2,525	7,320.00	125.91	-24.46
HES BEHEER	14,376	97,793	0.147	311	14,005	8.11	11,512	69,901	60.11	8,394	14,005.00	218.77	-150.55
HITT	272	28,021	0.010	107	14,783	2.64	12,273	31,824	140.76	7,872	14,783.00	194.36	-50.96
HOLLAND COLOURS	1,918	46,442	0.041	9,593	30,789	113.72	9,194	58,915	56.96	8,489	307,789.00	10.07	160.62
ICT Automatisering	6,081	59,994	0.101	-	8,908	0.00	26,260	88,285	108.57	2,747	8,908.00	112.56	-3.99
IMTECH	92,837	1,891,130	0.049	65,665	1,247,169	19.22	813,164	3,346,308	88.70	846,513	1,247,169.00	247.74	-139.83
KENDRION	4	303	0.012	69	87	289.32	91	169	196.01	100	87.30	418.10	67.23
KPN	2,649	24,797	0.107	150	914	59.90	2,619	13,632	70.12	4,137	914.00	1652.08	-1522.06

MACINTOSH Retail	54,515	403,176	0.135	158,966	525,032	110.51	36,225	920,285	14.37	93,113	525,032.00	64.73	60.15
MEDIQ	95,331	1,172,155	0.081	211,034	1,981,839	38.87	278,869	2,476,650	41.10	342,006	1,981,839.00	62.99	16.98
NEDAP	14,300	102,461	0.14	20,131	54,745	134.22	27,050	145,823	67.71	16,734	54,845.00	111.37	90.56
NUTRECO	121	1,993	0.061	267	3,174	30.67	585	4,021	53.10	750	4,021.10	68.09	15.68
Neways Electronics	14,491	119,325	0.121	53,769	166,428	117.92	48,329	280,997	62.78	46,573	166,428.00	102.14	78.56
OCE	78,863	2,491,169	0.032	328,112	1,881,717	63.64	868,413	3,098,223	102.31	632,213	1,881,717.00	122.63	43.32
OCTOPLUS	(15,175)	20,913	-0.73	494	4,031	44.73	1,050	5,194	73.79	5,306	4,031	480.45	-361.93
Oranjewoud A	16,483,572	170,156,364	0.097	-	72,216,594	0.00	84,002,965	236,561,374	129.61	18,086,201	72,216,594	91.41	38.20
ORDINA	30	532	0.057	-	116	0.00	169	665	92.54	155	116.00	487.40	-394.86
Philips	4,160	36,286	0.115	3,146	17,570	65.36	4,670	26,793	63.62	3,083	17,570.00	64.05	64.93
Porceleyne Fles	53	5,189	0.01	1,779	381	1704.29	382	3,826	36.44	458	381.00	438.77	1301.97
PUNCH Graphix	(4,883)	308,389	-0.02	34,614	50,055	252.40	35,380	135,065	95.61	23,127	50,055.00	168.64	179.37
Qurius	2,605	138,855	0.019	-	33,096	0.00	43,369	114,758	137.94	15,161	33,096.00	167.20	-29.26
Randstad	385	3,317	0.116	-	7,167	0.00	1,570	9,197	62.32	1,168	7,167.30	59.49	2.84
ROODMICROTEC	5	11,295	4E-04	146	882	60.42	2,073	9,528	79.41	1,009	882.00	417.56	-277.72
REED Elsevier	1,713	13,298	0.129	368	2,371	56.65	1,561	6,693	85.13	2,674	2,371.00	411.64	-269.87
ROTO SMEETS	5,439	303,785	0.018	8,554	207,179	15.07	78,977	484,978	59.44	75,197	207,179.00	132.48	-57.97
SBM OFFSHORE	266,766	3,634,622	0.073	15,448	2,435,624	2.32	569,344	2,871,214	72.38	909,081	2,435,624.00	136.23	-61.54
SIMAC Techniek	1,465	75,147	0.019	11,143	73,165	55.59	38,386	146,612	95.56	27,865	73,165.00	139.01	12.14
SLIGRO FOOD GROUP	74,177	857,973	0.086	187,016	1,592,431	42.87	105,607	2,065,686	18.66	114,461	1,592,431.00	26.24	35.29
STERN GROEP	13,199	507,683	0.026	177,964	683,767	95.00	26,964	858,759	11.46	87,625	683,867.00	46.77	59.69
SWEDISH AUTOMOBILE	(72,075)	68,012	-1.06	9,288	10,420	325.35	11,226	5,141	797.02	15,054	10,420.00	527.32	595.05
TELEGRAAF MEDIA GR	399,284	1,233,211	0.324	16,401	61,352	97.57	119,540	702,560	62.10	206,178	61,352.00	1226.61	-1066.93
TEN CATE	47	722	0.064	176	464	138.73	146	886	60.06	129	463.60	101.49	97.30
TIE Holding	(3,368)	6,568	-0.51	-	1,133	0.00	1,330	9,692	50.09	706	1,133.00	227.44	-177.35
TKH Group	44,766	661,094	0.068	144,759	528,330	100.01	202,464	837,812	88.21	148,222	528,330.00	102.40	85.81
TOMTOM	317,242	1,969,591	0.161	130,675	972,949	49.02	403,015	1,737,133	84.68	151,859	972,949.00	56.97	76.73
Unilever	4,136	23,743	0.174	3,894	34,942	40.68	4,194	40,187	38.09	8,017	34,942.00	83.74	-4.98
UNIT4	28,255	371,531	0.076	666	43,536	5.58	103,816	320,532	118.22	32,085	43,536.00	269.00	-145.19
USG People	140,513	1,959,449	0.072	-	2,919,853	0.00	800,353	3,887,681	75.14	555,633	2,919,853.00	69.46	5.68
VOPAK	198	2,133	0.093	-	245	0.00	189	884	78.12	259	245.00	386.45	-308.33
WAVIN	92,989	1,491,509	0.062	214,129	1,176,028	66.46	333,242	1,618,495	75.15	371,093	1,176,028.00	115.17	26.44
Wegener	31,249	775,830	0.04	2,993	73,603	14.84	77,321	678,654	41.59	28,464	73,603.00	141.15	-84.73
WESSANEN KON	58	913	0.063	211	1,050	73.37	192	1,598	43.75	146	1,049.70	50.66	66.46
WITTE MOLEN	(2,655)	17,205	-0.15	7,276	15,095	175.94	5,485	18,107	110.57	6,222	15,095.00	150.45	136.05
WOLTERS KLUWER	918	2,474	0.371	78	1,236	23.03	1,021	3,412	109.22	371	1,236.00	109.56	22.70

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Firm	Net income	Total assets	ROA	Inventories	COGS	Inv. Conv.	Receivables	Net sales	Sale-to-cash	Payables	COGS	Purchase to pay.	CCC
Aalberts Industries N.V.	93,835	1,703,447	0.055	360,168	735,937	178.63	178,686	1,750,752	37.25	181,400	735,937	89.97	125.92
Accell Group	28,567	335,420	0.085	136,050	339,005	146.48	74,273	538,035	50.39	52,166	339,005	56.17	140.70
AHOLD KON	1,082,000	13,603,000	0.080	1,319,000	18,777,000	25.64	744,000	25,648,000	10.59	2,284,000	18,777,000	44.40	-8.17
AFC AJAX	7,772	125,143	0.062	899	2,757	119.02	39,372	61,892	232.19	11,709	2,757	1550.16	-1198.95
AKZO NOBEL	(1,086,000)	18,734,000	-0.058	1,781,000	9,796,000	66.36	2,977,000	15,415,000	70.49	2,985,000	9,796,000	111.22	25.63
AMG	1,816	802,317	0.002	226,343	865,962	95.40	123,130	1,077,740	41.70	111,255	865,962	46.89	90.21
Amsterdam Commod.	8,741,509	64,206,935	0.136	29,339,554	156,847,259	68.28	13,842,833	175,266,444	28.83	7,397,328	156,847,259	17.21	79.89
Arcadis	63,020	1,058,364	0.060	771	578,011	0.49	538,539	1,739,949	112.97	133,235	578,011	84.13	29.32
ASM international	56,709	767,798	0.074	197,700	477,100	151.25	172,603	747,362	84.30	69,718	477,100	53.34	182.21
ASML Holding	322,370	3,939,394	0.082	999,150	1,938,164	188.16	463,273	2,953,678	57.25	193,690	1,938,164	36.48	208.935
Balast Nedam	24	1,004	0.024	199	1,077	67.44	295	1,426	75.51	300	1,077	101.67	41.28
BAM Groep KON	165,818	6,741,933	0.025	1,808,620	6,452,130	102.31	2,258,877	8,834,766	93.32	3,217,569	6,452,130	182.02	13.62
Batenburg Beheer	6,015	75,225	0.08	11,527	93,453	45.02	27,116	155,953	63.46	9,414	93,453	36.77	71.72
BE Semiconductor	(33,468)	242,879	-0.14	47,053	99,514	172.58	23,824	149,399	58.20	11,028	99,514	40.45	190.34
Beter Bed	22,126	96,978	0.228	49,393	163,079	110.55	1,129	358,565	1.15	13,472	163,079	30.15	81.55
BRIL KON	179	36,897	0.005	10,425	8,551	444.99	7,989	25,173	115.84	11,033	8,551	470.94	89.89
Brunel Intervat	45,498	235,410	0.193	-	547,217	0.00	141,000	714,228	72.06	17,511	547,217	11.68	60.38
CSM	90	2,107	0.043	311	2,100	54.07	332	2,599	46.66	237	2,100	41.18	59.54
CTAC	5,409	50,984	0.106	-	16,175	0.00	20,180	72,320	101.85	5,850	16,175	132.01	-30.16
AND international	1,332	18,608	0.072	-	4,925	0.00	1,155	3,600	117.10	2,264	4,925	167.79	-50.68
DPA Group	(13,491)	51,667	-0.26	-	52,308	0.00	23,376	70,207	121.53	15,005	52,308	104.70	16.83
DSM KON	571	9,653	0.059	1,765	8,536	75.47	1,525	9,297	59.87	1,188	8,536	50.80	84.54
EXACT Holding	36,825	238,561	0.154	414	18,700	8.08	49,799	260,973	69.65	5,328	18,700	104.00	-26.27
Fornix Biosciences	10,265	60,398	0.17	3,746	6,951	196.70	7,747	39,826	71.00	2,571	6,951	135.00	132.70
GRONTMIJ	38,770	627,344	0.062	-	182,254	0.00	305,694	844,478	132.13	253,681	182,254	508.05	-375.92
HEIMANS	(34,057)	2,219,830	-0.02	556,333	3,458,321	58.72	612,767	3,630,990	61.60	825,501	3,458,321	87.13	33.19
HEINEKEN	347	20,563	0.017	1,246	9,548	47.63	2,504	14,319	63.83	3,846	9,548	147.02	-35.56
HES BEHEER	14,400	102,927	0.14	249	15,102	6.02	9,824	78,292	45.80	9,208	15,102	222.55	-170.73
HITT	4,782	27,648	0.173	181	11,498	5.75	11,788	30,847	139.48	7,463	11,498	236.91	-91.68
HOLLAND COLOURS	796	44,315	0.018	10,017	31,928	114.51	8,921	60,176	54.11	7,774	31,928	88.87	79.75
ICT Automatisering	5,395	65,221	0.083	-	9,961	0.00	26,863	97,490	100.57	3,388	9,961	124.15	-23.57
IMTECH	113,539	2,473,314	0.046	82,653	1,384,467	21.79	987,594	3,859,443	93.40	964,628	1,384,467	254.31	-139.12
KENDRION	13	281	0.046	30	104	106.44	24	207	42.41	31	104	109.61	39.25
KPN	1,337	23,913	0.056	137	1,037	48.22	2,295	14,602	57.37	4,280	1,037	1506.46	-1400.87

MACINTOSH Retail	31,249	626,777	0.05	213,711	649,071	120.18	53,665	1,186,451	16.51	146,891	649,071	82.60	54.09
MEDIQ	(127,891)	1,117,075	-0.11	224,174	2,187,031	37.41	304,376	2,730,225	40.69	364,109	2,187,031	60.77	17.34
NEDAP	13,884	103,160	0.135	19,573	46,991	152.03	25,290	142,966	64.57	16,324	46,991	126.80	89.80
NUTRECO	117	2,188	0.053	282	3,984	25.81	722	4,943	53.30	852	3,984	78.09	1.02
Neways Electronics	(454)	102,110	0.00	47,087	144,271	119.13	34,938	242,776	52.53	33,777	144,271	85.45	86.20
OCE	3,764	2,548,889	0.001	352,814	1,817,988	70.83	897,898	2,908,960	112.66	696,433	1,817,988	139.82	43.67
OCTOPLUS	(6,209)	31,222	-0.2	634	3,460	66.88	2,126	16,923	45.85	3,222	3,460	339.89	-227.16
Oranjewoud A	17,186	219,386	0.078	-	122,723	0.00	118,426	363,145	119.03	28,368	122,723	84.37	34.66
ORDINA	(81)	461	-0.18	-	144	0.00	161	697	84.58	157	144	398.02	-313.44
Philips	(186)	33,041	-0.01	3,371	15,873	77.52	4,289	25,419	61.59	2,880	15,873	66.23	72.88
Porceleyne Fles	516	20,546	0.025	9,225	3,840	876.86	3,141	10,008	114.55	4,188	3,840	398.08	593.33
PUNCH Graphix	18,904	297,044	0.064	34,890	75,560	168.54	34,204	177,218	70.45	24,055	75,560	116.20	122.79
Qurius	(22,456)	118,582	-0.19	-	45,019	0.00	48,355	143,888	122.66	14,778	45,019	119.82	2.85
Randstad	18	7,723	0.002	-	11,066	0.00	2,820	14,038	73.33	2,148	11,066	70.86	2.47
ROODMICROTEC	84	14,675	0.006	324	1,712	69.08	2,807	13,057	78.47	2,121	1,712	452.20	-304.65
REED Elsevier	592	13,251	0.045	358	2,414	54.13	1,736	6,721	94.28	2,852	2,414	431.23	-282.82
ROTO SMEETS	1,286	288,630	0.004	12,285	202,867	22.10	70,953	447,547	57.87	56,811	202,867	102.21	-22.25
SBM OFFSHORE	227,875	4,344,994	0.052	23,305	2,646,660	3.21	672,795	3,060,276	80.24	1,039,467	2,646,660	143.35	-59.89
SIMAC Techniek	2,577	65,984	0.039	12,262	71,404	62.68	31,804	146,644	79.16	26,195	71,404	133.90	7.94
SLIGRO FOOD GROUP	71,348	875,153	0.082	199,652	1,651,526	44.12	119,486	2,167,585	20.12	128,743	1,651,526	28.45	35.79
STERN GROEP	4,422	541,259	0.008	185,260	734,330	92.08	24,534	912,674	9.81	81,896	734,330	40.71	61.19
SWEDISH AUTOMOBILE	(23,840)	60,542	-0.39	9,027	10,373	317.64	6,267	7,852	291.32	7,989	10,373	281.11	327.85
TELEGRAAF MEDIA GR	(360,765)	762,016	-0.47	18,417	56,831	118.28	93,224	688,072	49.45	178,772	56,831	1148.17	-980.44
TEN CATE	51	889	0.057	212	562	137.36	169	1,033	59.70	133	562	86.12	110.95
TIE Holding	(2,098)	7,431	-0.28	-	1,412	0.00	1,488	9,853	55.12	672	1,412	173.71	-118.59
TKH Group	50,316	721,559	0.07	140,405	627,625	81.65	225,255	997,036	82.46	166,724	627,625	96.96	67.16
TOMTOM	(872,048)	2,766,690	-0.32	145,398	893,309	59.41	289,981	1,674,013	63.23	152,119	893,309	62.15	60.48
Unilever	5,285	22,342	0.237	3,889	33,356	42.56	3,823	40,523	34.43	7,824	33,356	85.61	-8.62
UNIT4	12,281	476,664	0.026	474	39,926	4.33	89,614	393,590	83.10	16,780	39,926	153.40	-65.96
USG People	18,095	1,967,227	0.009	-	3,031,787	0.00	680,820	4,024,965	61.74	511,419	3,031,787	61.57	0.17
VOPAK	230	2,634	0.087	-	251	0.00	190	939	73.72	321	251	467.17	-393.45
WAVIN	32	1,376	0.023	172	1,198	52.45	271	1,581	62.44	359	1,198	109.44	5.45
Wegener	11,300	787,550	0.014	5,209	68,992	27.56	70,157	693,288	36.94	38,684	68,992	204.66	-140.16
WESSANEN KON	35	912	0.038	216	1,062	74.41	177	1,609	40.26	142	1,062	48.76	65.91
WITTE MOLEN	(2,173)	10,002	-0.22	2,660	16,551	58.66	2,487	20,333	44.64	1,366	16,551	30.12	73.18
WOLTERS KLUWER	315	3,774	0.083	86	1,202	26.11	1,029	3,374	111.32	356	1,202	108.10	29.33

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Firm	Net income	Total assets	ROA	Inventories	COGS	Inv. Conv.	Receivables	Net sales	Sale-to-cash	Payables	COGS	Purchase to pay.	CCC
Aalberts Industries N.V.	42,005	1,577,907	0.027	298,434	577,310	188.68	153,737	1,404,933	39.94	160,450	577,310	101.44	127.18
Accell Group	32,740	337,302	0.097	137,835	366,946	137.10	74,677	572,573	47.60	43,615	373,859	42.58	142.13
AHOLD KON	894,000	13,933,000	0.064	1,209,000	20,338,000	21.70	700,000	27,925,000	9.15	2,137,000	20,338,000	38.35	(7.51)
AFC AJAX	3,410	125,864	0.027	1,335	3,829	127.26	34,461	67,154	187.30	13,265	3,829	1264.49	-949.92
AKZO NOBEL	285,000	18,880,000	0.015	1,441,000	7,788,000	67.54	2,666,000	13,028,000	74.69	2,866,000	7,788,000	134.32	7.91
AMG	(68,761)	567,685	-0.12	135,365	491,302	100.57	103,195	607,213	62.03	48,854	491,302	36.29	126.30
Amsterdam Commod.	10,531,886	71,892,215	0.146	29,757,260	140,890,903	77.09	14,177,598	164,518,997	31.45	6,654,236	140,890,903	17.24	91.31
Arcadis	73,808	1,315,153	0.056	467	568,219	0.30	555,090	1,785,773	113.46	128,940	568,219	82.83	30.93
ASM international	(68,273)	851,700	-0.08	150,645	409,224	134.37	165,754	590,739	102.41	93,117	409,224	83.05	153.73
ASML Holding	(150,925)	3,764,151	-0.04	963,382	1,137,671	309.08	377,439	1,596,063	86.32	206,226	1,137,671	66.16	329.23
Balast Nedam	6	1,034	0.006	230	1,026	81.82	221	1,384	58.28	237	1,026	84.31	55.79
BAM Groep KON	36,231	6,808,841	0.005	1,737,445	6,230,198	101.79	2,110,349	8,324,160	92.54	3,833,011	6,230,198	224.56	-30.235
Batenburg Beheer	3,640	77,182	0.047	9,375	68,725	49.79	21,134	135,641	56.87	8,914	68,725	47.34	59.32
BE Semiconductor	5,398	269,540	0.020	55,133	107,111	187.88	36,341	147,891	89.69	27,290	107,111	93.00	184.57
Beter Bed	23,918	109,077	0.219	51,467	163,638	114.80	910	361,470	0.92	15,721	163,638	35.07	80.65
BRIL KON	2,087	37,227	0.056	10,419	8,557	444.42	7,921	26,124	110.67	10,610	8,557	452.57	102.52
Brunel Intervat	32,069	254,728	0.126	-	586,679	0.00	111,464	738,437	55.10	11,954	586,679	7.44	47.66
CSM	87	2,004	0.043	251	1,998	45.88	298	2,556	42.57	224	1,998	40.87	47.58
CTAC	(2,115)	43,902	-0.05	-	17,321	0.00	14,004	68,366	74.77	15,034	17,321	316.81	-242.04
AND international	1,465	23,096	0.063	-	7,375	0.00	721	5,001	52.62	1,918	7,375	94.92	-42.30
DPA Group	(7,745)	36,776	-0.21	-	41,766	0.00	11,705	51,337	83.22	3,218	41,766	28.12	55.10
DSM KON	336	9,614	0.035	1,359	6,092	81.42	1,321	7,866	61.30	1,169	6,092	70.04	72.68
EXACT Holding	33,841	230,251	0.147	314	16,656	6.88	42,005	232,516	65.94	3,823	16,656	83.78	-10.96
Fornix Biosciences	11,049	61,191	0.181	4,294	7,312	214.35	5,206	37,756	50.33	1,316	7,312	65.69	198.98
GRONTMIJ	20,409	596,179	0.034	36,343	169,925	78.06	242,408	799,800	110.63	241,378	169,925	518.48	-329.79
HEIMANS	(40,393)	1,853,407	-0.02	56,481	2,906,677	7.09	434,537	3,078,739	51.52	647,303	2,906,677	81.28	-22.67
HEINEKEN	1,142	20,180	0.057	1,010	9,650	38.20	2,310	14,701	57.35	3,696	9,650	139.80	-44.24
HES BEHEER	16,725	111,488	0.15	214	9,613	8.13	6,878	66,478	37.76	8,279	9,613	314.35	-268.46
HITT	312	26,790	0.012	246	14,230	6.31	12,335	32,296	139.41	6,724	14,230	172.47	-26.75
HOLLAND COLOURS	(621)	40,462	-0.02	7,661	28,384	98.52	8,092	53,337	55.38	7,156	28,384	92.02	61.87
ICT Automatisering	(1,696)	59,715	-0.03	-	7,765	0.00	19,682	79,090	90.83	2,256	7,765	106.05	-15.21
IMTECH	127	2,584	0.049	78	1,498	18.90	965	4,323	81.48	965	1,498	235.09	-134.71
KENDRION	4	153	0.026	22	68	119.88	25	150	60.27	26	68	136.47	43.68
KPN	2,175	24,851	0.088	93	852	39.84	1,865	13,509	50.39	3,990	852	1709.33	-1619.10

MACINTOSH Retail	31,373	593,457	0.053	201,990	603,636	122.14	45,243	1,116,620	14.79	153,502	603,636	92.82	44.11
MEDIQ	76,802	1,139,435	0.067	210,629	2,056,728	37.38	263,655	2,602,712	36.97	329,892	2,056,728	58.54	15.81
NEDAP	1,114	102,337	0.011	18,718	35,703	191.36	22,423	115,191	71.05	15,821	35,703	161.74	100.67
NUTRECO	93	2,125	0.044	251	3,574	25.64	606	4,512	49.03	826	3,574	84.39	-9.73
Neways Electronics	(5,740)	91,592	-0.063	38,442	110,205	127.32	33,439	188,438	64.77	30,220	110,205	100.09	92.00
OCE	(47,134)	2,207,180	-0.021	266,673	1,681,746	57.88	739,011	2,647,562	101.88	611,338	1,681,746	132.68	27.08
OCTOPLUS	(2,957)	29,741	-0.099	457	3,502	47.63	2,207	19,046	42.30	2,136	3,502	222.63	-132.70
Oranjewoud A	13,019	265,908	0.049	2,821	157,378	6.54	105,921	412,003	93.84	30,077	157,378	69.76	30.62
ORDINA	180	400,669	0.000	-	129,383	0.00	98,395	542,311	66.22	114,484	129,383	322.97	-256.74
Philips	424	30,527	0.014	2,913	15,110	70.37	3,902	23,189	61.42	2,775	15,110	67.03	64.75
Porceleyne Fles	87	19,470	0.004	8,238	11,386	264.08	3,373	23,907	51.50	3,009	11,386	96.46	219.12
PUNCH Graphix	(15,931)	285,428	-0.056	22,540	56,712	145.07	23,484	125,819	68.13	17,106	56,712	110.09	103.10
Qurius	(8,983)	95,511	-0.094	-	38,628	0.00	31,056	117,201	96.72	10,426	38,628	98.52	-1.80
Randstad	68	6,458	0.010	-	9,979	0.00	2,266	12,400	66.71	1,870	9,979	68.40	-1.69
ROODMICROTEC	(1,742)	17,713	-0.098	589	2,101	102.33	2,312	11,922	70.78	2,026	2,101	351.97	-178.86
REED Elsevier	395	11,334	0.035	275	2,252	44.57	1,492	6,071	89.70	2,471	2,252	400.50	-266.22
ROTO SMEETS	(27,462)	261,868	-0.105	9,070	189,618	17.46	62,362	415,387	54.80	59,562	189,618	114.65	-42.40
SBM OFFSHORE	229,981	4,658,481	0.049	25,763	2,504,211	3.76	681,562	2,956,545	84.14	1,005,421	2,504,211	146.54	-58.65
SIMAC Techniek	2,560	63,482	0.040	11,580	57,465	73.55	30,351	132,276	83.75	21,795	57,465	138.44	18.87
SLIGRO FOOD GROUP	74,310	852,196	0.087	189,282	1,732,311	39.88	107,716	2,258,021	17.41	109,784	1,732,311	23.13	34.16
STERN GROEP	3,028	5,039,112	0.001	164,632	659,104	91.17	21,715	828,703	9.56	71,095	359,104	72.26	28.47
SWEDISH AUTOMOBILE	(22,953)	64,183	-0.358	5,108	7,383	252.53	8,020	6,604	443.26	6,537	7,383	323.18	372.61
TELEGRAAF MEDIA GR	69,326	762,796	0.091	14,736	52,556	102.34	80,798	611,840	48.20	173,385	52,556	1204.15	-1053.61
TEN CATE	14	749	0.019	155	392	144.47	101	842	43.69	112	392	104.49	83.68
TIE Holding	540	9,076	0.059	-	1,367	0.00	1,817	11,190	59.27	494	1,367	131.90	-72.63
TKH Group	3,050	642,130	0.005	114,957	430,129	97.55	146,263	726,436	73.49	179,866	430,129	152.63	18.41
TOMTOM	86,386	2,685,760	0.032	66,719	748,624	32.53	294,024	1,479,660	72.53	201,176	748,624	98.09	6.97
Unilever	3,659	25,417	0.144	3,578	34,803	37.52	3,429	39,823	31.43	8,413	34,803	88.23	-19.28
UNIT4	19,733	474,397	0.042	402	32,191	4.56	85,574	379,450	82.32	13,694	32,191	155.27	-68.40
USG People	(30,826)	1,643,630	-0.019	-	2,326,898	0.00	424,037	3,001,134	51.57	444,078	2,326,898	69.66	-18.09
VOPAK	277	3,136	0.088	-	274	0.00	182	1,022	65.07	281	274	373.51	-308.44
WAVIN	1,819	1,314,865	0.001	145,999	870,081	61.25	237,626	1,159,626	74.79	294,286	870,081	123.45	12.59
Wegener	7,853	699,522	0.011	2,219	55,591	14.57	54,622	586,334	34.00	25,253	55,591	165.81	-117.23
WESSANEN KON	(222)	638	-0.347	69	430	58.51	70	703	36.07	78	430	66.41	28.17
WITTE MOLEN	170	8,952	0.019	2,065	12,037	62.62	1,657	16,634	36.36	672	12,037	20.38	78.60
WOLTERS KLUWER	110	3,655	0.030	79	1,226	23.52	998	3,425	106.36	-	1,226	0.00	129.88

31-12-2010													
Firm	**Net income**	**Total assets**	**ROA**	**Inventories**	**COGS**	**Inv. Conv.**	**Receivables**	**Net sales**	**Sale-to-cash**	**Payables**	**COGS**	**Purchase to pay.**	**CCC**
Aalberts Industries N.V.	106,447	1,777,505	0.06	386,668	678,615	207.97	199,870	1,682,781	43.35	223,011	678,615	119.95	131.38
Accell Group	36,380	383,934	0.09	178,941	373,859	174.70	76,369	577,226	48.29	55,519	373,859	54.20	168.79
AHOLD KON	853,000	14,725,000	0.06	1,331,000	21,610,000	22.48	772,000	29,530,000	9.54	2,323,000	21,610,000	39.24	-7.21
AFC AJAX	22,808	95,828	0.24	1,152	3,274	128.43	22,040	69,468	115.80	6,778	3,274	755.64	-511.41
AKZO NOBEL	754,000	20,094,000	0.04	1,678,000	8,672,000	70.63	2,896,000	14,640,000	72.20	3,305,000	8,672,000	139.11	3.72
AMG	1,504	641,306	0.00	155,403	608,953	93.15	131,566	742,871	64.64	76,690	608,953	45.97	111.82
Amsterdam Commod.	15,475,878	238,600,493	0.06	100,281,831	314,647,540	116.33	54,975,711	374,907,518	53.52	30,821,735	314,647,540	35.75	134.10
Arcadis	77,449	1,424,530	0.05	419	628,090	0.24	591,985	2,002,807	107.89	139,760	628,090	81.22	26.91
ASM international	242,523	1,214,117	0.20	254,557	673,322	137.99	271,271	1,222,900	80.97	170,553	673,322	92.45	126.50
ASML Holding	1,021,820	6,180,358	0.17	1,497,180	2,552,768	214.07	1,123,534	4,507,938	90.97	555,397	2,552,768	79.41	225.63
Balast Nedam	7	1,084	0.01	252	1,005	91.52	230	1,359	61.77	217	1,005	78.81	74.48
BAM Groep KON	18,366	7,133,847	0.00	1,564,208	5,538,251	103.09	2,085,888	7,610,742	100.04	3,267,605	5,538,251	215.35	-12.227
Batenburg Beheer	5,730	79,215	0.07	11,630	70,378	60.32	22,562	142,478	57.80	8,750	70,378	45.38	72.7358
BE Semiconductor	47,253	350,484	0.13	79,269	212,659	136.05	86,889	351,149	90.32	42,626	212,659	73.16	153.209
Beter Bed	27,937	113,977	0.25	56,633	165,217	125.11	1,086	374,724	1.06	17,189	165,217	37.97	88.1981
BRIL KON	2,785	38,867	0.07	10,253	9,499	393.97	7,762	27,054	104.72	10,768	9,499	413.76	84.93
Brunel Intervat	25,601	294,190	0.09	-	568,944	0.00	151,311	720,924	76.61	21,548	568,944	13.82	62.78
CSM	99	2,627	0.04	335	2,352	52.06	366	2,990	44.68	297	2,352	46.05	50.68
CTAC	201	50,098	0.00	-	16,412	0.00	18,201	71,402	93.04	17,968	16,412	399.61	-306.56
AND international	2,474	24,666	0.10	-	4,630	0.00	1,651	6,975	86.40	1,112	4,630	87.66	-1.2667
DPA Group	(5,011)	32,886	-0.15	-	28,857	0.00	8,201	36,272	82.53	2,418	28,857	30.58	51.94
DSM KON	525	10,480	0.05	1,340	6,598	74.13	1,361	9,050	54.89	1,277	6,598	70.64	58.38
EXACT Holding	33,386	239,031	0.14	415	16,529	9.16	33,822	228,200	54.10	5,133	16,529	113.35	-50.09
Fornix Biosciences	13,621	22,186	0.61	-	5,138	0.00	1,234	22,482	20.03	148	5,138	10.51	9.52
GRONTMIJ	17,252	874,099	0.02	18,679	205,465	33.18	357,716	716,220	182.30	328,038	205,465	582.75	-367.26
HEIMANS	15,674	1,599,666	0.01	52,250	2,358,721	8.09	369,899	2,680,427	50.37	502,538	2,358,721	77.77	-19.31
HEINEKEN	1,568	26,549	0.06	1,206	10,291	42.77	2,273	16,133	51.43	4,265	10,291	151.27	-57.07
HES BEHEER	21,867	141,926	0.15	306	12,246	9.12	11,224	75,825	54.03	8,747	12,246	260.71	-197.56
HITT	2,240	31,293	0.07	221	16,345	4.94	12,501	36,234	125.93	10,213	16,345	228.07	-97.20
HOLLAND COLOURS	1,154	39,229	0.03	7,266	26,750	99.14	10,321	51,037	73.81	6,955	26,750	94.90	78.06
ICT Automatisering	6,565	69,410	0.09	-	9,013	0.00	22,736	84,536	98.17	2,384	9,013	96.54	1.62
IMTECH	142	3,046	0.05	83	1,518	19.86	1,059	4,481	86.30	1,122	1,518	269.84	-163.68
KENDRION	17	177	0.09	28	111	92.98	30	223	49.50	33	111	108.81	33.67
KPN	1,795	22,737	0.08	153	911	61.30	1,867	13,398	50.86	3,982	911	1595.42	-1483.26

MACINTOSH Retail	40,074	608,710	0.07	230,189	597,536	140.61	42,017	1,130,939	13.56	177,054	597,536	108.15	46.02
MEDIQ	78,258	1,195,813	0.07	231,809	2,043,306	41.41	297,405	2,633,940	41.21	360,267	2,043,306	64.36	18.27
NEDAP	8,765	112,972	0.08	21,635	44,552	177.25	28,533	133,558	77.98	16,360	44,552	134.03	121.19
NUTRECO	113	2,364	0.05	309	3,914	28.82	675	4,940	49.85	1,004	3,914	93.63	-14.96
Neways Electronics	5,122	109,560	0.05	51,740	150,893	125.16	39,328	254,462	56.41	47,098	150,893	113.93	67.64
OCE	(164,759)	2,141,688	-0.08	294,095	1,823,163	58.88	722,216	2,860,026	92.17	533,244	1,823,163	106.76	44.29
OCTOPLUS	(6,202)	25,347	-0.24	307	1,090	102.80	1,735	8,329	76.03	1,471	1,090	492.58	-313.75
Oranjewoud A	14,181	1,283,899	0.01	27,111	286,140	34.58	393,330	698,974	205.39	213,035	286,140	271.75	-31.77
ORDINA	(3,958)	346,130	-0.01	-	114,104	0.00	84,853	455,922	67.93	87,024	114,104	278.38	-210.44
Philips	(92)	32,269	0.00	3,865	17,938	78.64	4,355	26,385	60.25	3,686	17,938	75.00	63.89
Porceleyne Fles	(751)	21,080	-0.04	8,969	11,691	280.02	2,866	24,795	42.19	3,189	11,691	99.56	222.64
PUNCH Graphix	4,656	270,803	0.02	24,241	63,220	139.96	24,018	143,011	61.30	18,939	63,220	109.34	91.91
Qurius	(8,125)	83,181	-0.10	-	33,958	0.00	19,610	101,434	70.56	11,321	33,958	121.68	-51.12
Randstad	289	7,039	0.04	-	11,510	0.00	2,788	14,179	71.78	2,261	11,510	71.70	0.08
ROODMICROTEC	448	13,726	0.03	654	3,321	71.88	3,040	15,563	71.30	2,443	3,321	268.50	-125.33
REED Elsevier	648	11,158	0.06	228	2,209	37.67	1,475	6,055	88.91	2,584	2,209	426.96	-300.38
ROTO SMEETS	(22,547)	229,104	-0.10	6,962	146,180	17.38	55,179	345,860	58.23	45,482	146,180	113.56	-37.95
SBM OFFSHORE	276,011	5,090,987	0.05	29,280	2,544,347	4.20	723,560	3,055,761	86.43	893,554	2,544,347	128.19	-37.56
SIMAC Techniek	4,478	65,917	0.07	9,712	61,555	57.59	32,959	137,861	87.26	23,803	61,555	141.14	3.71
SLIGRO FOOD GROUP	70,196	937,310	0.07	195,047	1,757,649	40.50	105,181	2,286,261	16.79	106,906	1,757,649	22.20	35.10
STERN GROEP	10,151	496,766	0.02	175,729	743,473	86.27	18,340	920,375	7.27	79,781	743,473	39.17	54.38
SWEDISH AUTOMOBILE	(218,283)	1,077,682	-0.20	289,960	755,045	140.17	117,432	819,235	52.32	578,669	755,045	279.74	-87.25
TELEGRAAF MEDIA GR	80,961	796,681	0.10	7,401	44,377	60.87	80,555	592,297	49.64	170,142	44,377	1399.41	-1288.9
TEN CATE	47	891	0.05	217	501	157.99	151	985	55.98	159	501	116.03	97.94
TIE Holding	(1,765)	8,236	-0.21	-	1,307	0.00	1,539	11,013	51.01	435	1,307	121.48	-70.47
TKH Group	40,876	676,786	0.06	137,336	544,970	91.98	165,260	893,520	67.51	211,554	544,970	141.69	17.80
TOMTOM	107,670	2,622,758	0.04	93,822	777,018	44.07	305,821	1,521,083	73.38	218,419	777,018	102.60	14.86
Unilever	4,598	27,561	0.17	4,309	37,923	41.47	4,135	44,262	34.10	10,226	37,923	98.42	-22.85
UNIT4	24,064	568,903	0.04	3,319	36,212	33.45	107,121	421,738	92.71	17,844	36,212	179.86	-53.70
USG People	15,396	1,676,561	0.01	-	2,422,289	0.00	477,875	3,098,630	56.29	548,618	2,422,289	82.67	-26.38
VOPAK	301	3,831	0.08	-	294	0.00	216	1,115	70.72	306	294	380.67	-309.95
WAVIN	7,100	1,360,894	0.01	171,938	940,076	66.76	266,494	1,231,252	79.00	316,582	940,076	122.92	22.84
Wegener	(32,556)	658,381	-0.05	1,945	36,968	19.20	44,177	531,442	30.34	19,674	36,968	194.25	-144.70
WESSANEN KON	(5)	392	-0.01	63	450	51.46	66	712	34.03	75	450	60.55	24.94
WITTE MOLEN	(136)	7,992	-0.02	1,899	8,238	84.14	1,168	12,363	34.48	843	8,238	37.35	81.27
WOLTERS KLUWER	287	4,177	0.07	85	1,278	24.28	1,052	3,556	107.98	-	1,278	0.00	132.26

APPENDIX 1B: DATA COLLECTION FOR THE CONTROL VARIABLES

The control variables relevant for the research are the Natural Logarithm of Sales (LOS), the Fixed Financial Asset Ratio and the Fixed Debt Ratio. The Natural Logarithm of Sales is calculated as is stated: the natural logarithm of the firm's sales (LN sales). The Fixed Financial Asset Ratio is calculated through fixed financial assets divided by the total assets (Deloof, 2003; Lazaridis and Tryfonidis, 2006; Mathuva, 2009; Dong and Su, 2010). The fixed Debt Ratio is calculated through the total debt (short-term debt and long-term debt) divided by the total assets (Lazaridis and Tryfonidis, 2006; Dong and Su, 2010). The GDP annual growth rate is derived from the Statline CBS (Centraal Bureau voor de Statistiek) of the Netherlands.

31-12-2006										
Firm	**Sales**	**LOS**	**Fixed fin.assets**	**Total assets**	**FFA ratio**	**S-T loans**	**L-T loans**	**Total assets**	**Fin. Debt ratio**	**GDP**
Aalberts Industries N.V.	1,440,347,000	21.09	1,852.00	1,278,930.00	0.00	482,977.00	408,391.00	1,278,930.00	0.70	3.4
Accell Group	431,730,000	19.88	9,006.00	242,599.00	0.04	100,035.00	39,047.00	242,599.00	0.57	
AHOLD KON	27,826,000,000	24.05	799,000.00	18,442,000.00	0.04	5,821,000.00	7,351,000.00	18,442,000.00	0.71	
AFC AJAX	74,430,000	18.13	16,926.00	106,183.00	0.16	31,958.00	339.00	106,183.00	0.30	
AKZO NOBEL	10,023,000,000	23.03	1,706,000.00	12,785,000	0.13	3,658,000.00	4,864,000.00	12,785,000	0.67	
AMG	889,468,280	20.61	105,286	2,266,032	0.05	244,641	1,367,353	2,266,032	0.71	
Amsterdam Commod.	143,132,342	18.78	11,651,642	57,343,797	0.20	26,913,610	1,150,000	57,343,797	0.49	
Arcadis	1,233,043,000	20.93	11,429	736,470	0.02	370,251	165,502	736,470	0.73	
ASM international	877,491,000	20.59	-	845,326	0.00	236,439	179,803	845,326	0.49	
ASML Holding	3,581,776,000	22.00	-	3,951,035	0.00	1,181,413	613,167	3,951,035	0.45	
Balast Nedam	1,310,000,000	20.99	34	794	0.04	555	81	794	0.80	
BAM Groep KON	8,646,131,000	22.88	262,967	6,404,137	0.04	3,816,194	1,891,094	6,404,137	0.89	
Batenburg Beheer	142,304,000	18.77	469	70,952.00	0.01	29,009.00	3,190.00	70,952.00	0.45	
BE Semiconductor	191,191,000	19.07	-	314,008.00	0.00	61,634.00	57,843.00	314,008.00	0.38	
Beter Bed	320,017,000	19.58	-	82,957.00	0.00	38,705.00	417.00	82,957.00	0.47	
BRIL KON	25,645,000	17.06	29.00	35,687.00	0.00	15,308.00	3,966.00	35,687.00	0.54	
Brunel Intervat	499,070,000	20.03	593.00	383,795	0.00	61,557.00	-	383,795	0.16	
CSM	2,421,400,000	21.61	10.40	2,225.10	0.00	545.10	835.10	2,225.10	0.62	
CTAC	38,120,000	17.46	1,031.00	19,405.00	0.05	8,853.00	-	19,405.00	0.46	
AND international	3,865,000	15.17	-	14,683	0.00	2,168	1,338	14,683.00	0.24	
DPA Group	76,368,000	18.15	-	48,080.00	0.00	14,846.00	2,635.00	48,080.00	0.36	
DSM KON	8,352,000,000	22.85	126.00	10,091.00	0.01	2,410.00	1,826.00	10,091.00	0.42	
EXACT Holding	242,065,000	19.30	-	280,648.00	0.00	16,615.00	79,330.00	280,648.00	0.34	
Fornix Biosciences	34,798,000	17.37	-	57,056.00	0.00	15,915.00	635.00	57,056.00	0.29	
GRONTMIJ	533,876,000	20.10	13,322	533,810.00	0.02	200,209.00	167,880.00	533,810.00	0.69	
HEIMANS	2,942,078,000	21.80	86,610	2,129,877.00	0.04	1,172,656.00	515,378.00	2,129,877.00	0.79	
HEINEKEN	11,829,000,000	23.19	972	12,997.00	0.07	4,008.00	3,469.00	12,997.00	0.58	
HES BEHEER	63,212,000	17.96	24,552	84,931.00	0.29	16,779.00	10,834.00	84,931.00	0.33	
HITT	27,875,000	17.14	-	27,788.00	0.00	8,688.00	4,162.00	27,788.00	0.46	
HOLLAND COLOURS	62,582,000	17.95	63	47,472.00	0.00	13,704.00	11,277.00	47,472.00	0.53	
ICT Automatisering	80,663,000	18.21	772	57,357.00	0.01	17,295.00	1,400.00	57,357.00	0.33	
IMTECH	2,838,910,000	21.77	1,848	1,576,846.00	0.00	1,021,712.00	220,638.00	1,576,846.00	0.79	
KENDRION	568,500,000	20.16	-	291.50	0.00	116.40	91.30	291.50	0.71	
KPN	12,057,000,000	23.21	11	21,258.00	0.00	3,849.00	13,213.00	21,258.00	0.80	

MACINTOSH Retail	983,838,000	20.71	5,259	272,191.00	0.02	177,306.00	118,278.00	272,191.00	1.09	
MEDIQ	2,281,042,000	21.55	38,342	1,050,848.00	0.04	368,388.00	171,242.00	1,050,848.00	0.51	
NEDAP	138,509,000	18.75	1,693.00	102,061.00	0.02	27,901.00	20,204.00	102,061.00	0.47	
NUTRECO	3,009,000,000	21.82	2.10	1,799.10	0.00	760.50	289.00	1,799.10	0.58	
Neways Electronics	238,632,000	19.29	-	105,752.00	0.00	58,698.00	9,476.00	105,752.00	0.64	
OCE	3,110,323,000	21.86	11,209.00	2,605,670.00	0.00	808,548.00	1,078,677.00	2,605,670.00	0.72	
OCTOPLUS	6,051,000	15.62	-	32,266.00	0.00	7,506.00	3,618.00	32,266.00	0.34	
Oranjewoud A	120,962,810	18.61	45,000.00	144,363,468.00	0.00	57,522,232.00	21,125,691.00	144,363,468.00	0.54	
ORDINA	530,411,000	20.09	119.00	457,037.00	0.00	190,539.00	71,887.00	457,037.00	0.57	
Philips	26,682,000,000	24.01	11,034.00	38,497.00	0.29	9,130.00	6,239.00	38,497.00	0.40	
Porceleyne Fles	4,137,000	15.24	-	4,905	0.00	894	316	4,905	0.25	
PUNCH Grapghix	35,465,000	17.38	-	52,986	0.00	19,695	4,659	52,986.00	0.46	
Qurius	41,859,000	17.55	17,333	87,767	0.20	41,865	10,000	87,767.00	0.59	
Randstad	8,186,100,000	22.83	12	2,578	0.00	1,273	514	2,577.80	0.69	
ROODMICROTEC	8,892,000	16.00	-	11,174	0.00	3,206	4,633	11,174.00	0.70	
REED Elsevier	5,398,000,000	22.41	73	8,532	0.01	3,334	3,219	8,532.00	0.77	
ROTO SMEETS	531,258,000	20.09	1,802	325,517	0.01	70,531	119,269	325,517.00	0.58	
SBM OFFSHORE	1,989,689,000	21.41	72,190	2,940,336	0.02	1,017,422	803,891	2,940,336.00	0.62	
SIMAC Techniek	131,294,000	18.69	531	62,830	0.01	41,686	9,205	62,830.00	0.81	
SLIGRO FOOD GROUP	1,661,175,000	21.23	7,414	719,266	0.01	174,757	231,672	719,266.00	0.57	
STERN GROEP	519,256,000	20.07	11,268	407,885	0.03	193,775	99,222	407,885.00	0.72	
SWEDISH AUTOMOBILE	36,293,000	17.41	-	186,044	0.00	80,377	22,850	186,044.00	0.55	
TELEGRAAF MEDIA GR	790,468,000	20.49	89,078	1,042,573	0.09	240,155	297,890	1,042,573.00	0.52	
TEN CATE	770,500,000	20.46	1	489	0.00	143	107	489.10	0.51	
TIE Holding	8,434,000	15.95	2,796	9,555	0.29	4,430	336	9,555.00	0.50	
TKH Group	685,492,000	20.35	19,434	476,767	0.04	192,790	26,031	476,767.00	0.46	
TOMTOM	1,363,758	14.13	12,061	902,968	0.01	307,093	1,300	902,968.00	0.34	
Unilever	39,642,000,000	24.40	1,266	23,188	0.05	13,884	11,516	23,188.00	1.10	
UNIT4	230,742,000	19.26	15,724	379,006	0.04	148,779	40,840	379,006.00	0.50	
USG People	3,536,836,000	21.99	75,688	1,899,782	0.04	929,711	394,522	1,899,782.00	0.70	
VOPAK	781,400,000	20.48	223	1,821	0.12	386	699	1,820.60	0.60	
WAVIN	1,501,490,000	21.13	15,569	1,464,181	0.01	391,900	772,340	1,464,181.00	0.80	
Wegener	668,055,000	20.32	9,330	775,830	0.01	248,331	244,421	775,830.00	0.64	
WESSANEN KON	1,597,200,000	21.19	1	951	0.00	307	164	950.70	0.50	
WITTE MOLEN	71,930,000	18.09	354	22,966	0.02	3,718	401	22,966.00	0.18	
WOLTERS KLUWER	3,693,000,000	22.03	113	2,819	0.04	2,834	-	2,819.00	1.01	

31-12-2007										
Firm	**Sales**	**LOS**	**Fixed fin.assets**	**Total assets**	**FFA ratio**	**S-T loans**	**L-T loans**	**Total assets**	**Fin. Debt ratio**	**GDP**
Aalberts Industries N.V.	1,702,523,000	21.26	2,007	1,434,468	0.0014	472,369	423,903	1,434,369	0.62	3.9
Accell Group	476,073,000	19.98	3,949	277,631	0.0142	106,870	63,680	277,631	0.61	
AHOLD KON	24,893,000,000	23.94	869,000	13,944,000	0.0623	4,933,000	5,124,000	13,944,000	0.72	
AFC AJAX	64,891,000	17.99	18,813	92,481	0.2034	31,353	316	92,481	0.34	
AKZO NOBEL	10,217,000,000	23.05	1,402,000	19,243,000	0.0729	4,429,000	3,695,000	19,243,000	0.42	
AMG	785,848,120	20.48	7,806	609,652	0.0128	208,313	190,677	609,652	0.65	
Amsterdam Commod.	161,863,325	18.90	10,447,454	66,279,458	0.1576	32,629,413	1,599,882	66,279,458	0.52	
Arcadis	1,510,238,000	21.14	21,016	921,673	0.0228	505,780	216,695	921,673	0.78	
ASM international	955,239,000	20.68	-	840,333	0.0000	241,339	159,492	840,333	0.48	
ASML Holding	3,768,185,000	22.05	-	4,073,128	0.0000	1,326,757	748,383	4,073,128	0.51	
Balast Nedam	1,270,000,000	20.96	23	898	0.0256	590	136	898	0.81	
BAM Groep KON	8,538,555,000	22.87	221,218	6,985,472	0.0317	3,807,068	2,174,053	6,985,472	0.86	
Batenburg Beheer	144,105,000	18.79	-	75,199	0.0000	30,767	1,384	75,199	0.43	
BE Semiconductor	166,471,000	18.93	-	285,005	0.0000	52,367	53,920	285,005	0.37	
Beter Bed	351,171,000	19.68	-	95,160	0.0000	48,322	1,772	95,160	0.53	
BRIL KON	25,883,000	17.07	1,020	36,960	0.0276	15,098	3,075	36,960	0.49	
Brunel Intervat	579,889,000	20.18	384	197,873	0.0019	134,890	-	197,873	0.68	
CSM	2,485,600,000	21.63	14	2,048	0.0068	424	667	2,048	0.53	
CTAC	50,300,000	17.73	813	45,781	0.0178	17,341	17,388	45,781	0.76	
AND international	4,680,000	15.36	-	16,899	0.0000	2,242	1,520	16,899	0.22	
DPA Group	84,322,000	18.25	-	65,513	0.0000	31,832	3,274	65,513	0.54	
DSM KON	8,757,000,000	22.89	146	9,828	0.0149	2,063	2,382	9,828	0.45	
EXACT Holding	252,109,000	19.35	-	275,024	0.0000	86,214	23,167	275,024	0.40	
Fornix Biosciences	38,093,000	17.46	-	59,187	0.0000	9,548	431	59,187	0.17	
GRONTMIJ	798,011,000	20.50	23,948	596,519	0.0401	291,364	147,952	596,519	0.74	
HEIMANS	3,731,854,000	22.04	75,825	2,205,067	0.0344	1,173,448	569,141	2,205,067	0.79	
HEINEKEN	11,245,000,000	23.14	1,289	11,954	0.1078	3,777	2,466	11,954	0.52	
HES BEHEER	69,901,000	18.06	28,518	97,793	0.2916	20,454	10,729	97,793	0.32	
HITT	31,824,000	17.28	-	28,021	0.0000	14,389	4,389	28,021	0.67	
HOLLAND COLOURS	58,915,000	17.89	-	46,442	0.0000	16,574	7,515	46,442	0.52	
ICT Automatisering	88,285,000	18.30	321	59,994	0.0054	17,677	1,200	59,994	0.31	
IMTECH	3,346,308,000	21.93	2,438	1,365,543	0.0018	293,671	1,227,357	1,365,543	1.11	
KENDRION	168,900,000	18.94	-	303	0.0000	112	103	303	0.71	
KPN	12,632,000,000	23.26	27	24,797	0.0011	6,577	13,702	24,797	0.82	

MACINTOSH Retail	920,285,000	20.64	3,600	403,176	0.0089	102,138	102,331	403,176	0.51	
MEDIQ	2,476,650,000	21.63	11,556	1,172,155	0.0099	402,347	191,529	1,172,155	0.51	
NEDAP	145,823,000	18.80	1,840	102,461	0.0180	24,272	21,069	102,461	0.44	
NUTRECO	4,021,100,000	22.11	17	1,993	0.0085	888	454	1,993	0.67	
Neways Electronics	280,997,000	19.45	-	119,325	0.0000	64,433	5,978	119,325	0.59	
OCE	3,098,223,000	21.85	11,531	2,491,169	0.0046	737,393	1,041,177	2,491,169	0.71	
OCTOPLUS	5,194,000	15.46	-	20,913	0.0000	10,688	3,558	20,913	0.68	
Oranjewoud A	236,561,374	19.28	1,122,790	170,156,364	0.0066	73,788,437	14,169,197	170,156,364	0.52	
ORDINA	665,400,000	20.32	6	532	0.0109	221	57	532	0.52	
Philips	26,793,000,000	24.01	5,069	36,286	0.1397	9,633	4,969	36,286	0.40	
Porceleyne Fles	3,826,000	15.16	-	5,189	0.0000	570	318	5,189	0.17	
PUNCH Grapghix	135,065,000	18.72	-	308,389	0.0000	89,226	45,344	308,389	0.44	
Qurius	114,758,000	18.56	8,138	138,855	0.0586	55,246	10,362	138,855	0.47	
Randstad	9,197,000,000	22.94	491	3,317	0.1480	1,335	960	3,317	0.69	
ROODMICROTEC	9,528,000	16.07	-	11,295	0.0000	4,212	3,739	11,295	0.70	
REED Elsevier	6,693,000,000	22.62	158	13,298	0.0119	5,260	3,877	13,298	0.69	
ROTO SMEETS	484,978,000	20.00	1,350	303,785	0.0044	55,554	113,003	303,785	0.55	
SBM OFFSHORE	2,871,214,000	21.78	92,621	3,634,622	0.0255	1,330,461	966,427	3,634,622	0.63	
SIMAC Techniek	145,612,000	18.80	571	75,147	0.0076	13,364	8,692	75,147	0.29	
SLIGRO FOOD GROUP	2,065,686,000	21.45	38,232	857,973	0.0446	270,554	212,644	857,973	0.56	
STERN GROEP	858,759,000	20.57	14,049	507,683	0.0277	253,296	109,382	507,683	0.71	
SWEDISH AUTOMOBILE	5,141,000	15.45	-	68,012	0.0000	39,849	3,316	68,012	0.63	
TELEGRAAF MEDIA GR	702,560,000	20.37	22,626	1,233,211	0.0183	250,524	111,851	1,233,211	0.29	
TEN CATE	886,000,000	20.60	6	722	0.0086	412	263	722	0.93	
TIE Holding	9,692,000	16.09	2,255	6,568	0.3433	4,107	320	6,568	0.67	
TKH Group	837,812,000	20.55	3,517	661,094	0.0053	260,038	135,543	661,094	0.60	
TOMTOM	1,737,133	14.37	841,151	1,969,591	0.4271	574,828	42,413	1,969,591	0.31	
Unilever	40,187,000,000	24.42	1,003	23,743	0.0422	13,559	10,924	23,743	1.03	
UNIT4	320,532,000	19.59	12,749	371,531	0.0343	169,072	31,504	371,531	0.54	
USG People	3,887,681,000	22.08	48,114	1,959,449	0.0246	765,461	508,276	1,959,449	0.65	
VOPAK	883,500,000	20.60	221	2,133	0.1035	407	846	2,133	0.59	
WAVIN	1,618,495,000	21.20	17,375	1,491,509	0.0116	443,873	677,862	1,491,509	0.75	
Wegener	678,654,000	20.34	7,788	787,550	0.0099	221,732	254,772	787,550	0.61	
WESSANEN KON	1,597,600,000	21.19	1	913	0.0005	267	216	913	0.53	
WITTE MOLEN	18,107,000	16.71	-	17,205	0.0000	12,965	131	17,205	0.76	
WOLTERS KLUWER	3,413,000,000	21.95	28	2,474	0.0113	2,802	-	2,474	1.13	

31-12-2008										
Firm	**Sales**	**LOS**	**Fixed fin.assets**	**Total assets**	**FFA ratio**	**S-T loans**	**L-T loans**	**Total assets**	**Fin. Debt ratio**	**GDP**
Aalberts Industries N.V.	1,750,752,000	21.28	3,458	1,703,447	0.00203	472,415	644,079	1,703,447	0.66	1.9
Accell Group	538,035,000	20.10	3,882	335,420	0.01157	109,445	93,852	335,420	0.61	
AHOLD KON	25,648,000,000	23.97	972,000	13,603,000	0.07145	4,138,000	4,778,000	13,603,000	0.66	
AFC AJAX	61,892,000	17.94	17,752	125,143	0.14185	49,178	380	125,143	0.40	
AKZO NOBEL	15,415,000,000	23.46	1,848,000	18,734,000	0.09864	5,693,000	5,128,000	18,734,000	0.58	
AMG	1,077,740,240	20.80	11,147	802,317	0.01389	350,830	230,101	802,317	0.72	
Amsterdam Commod.	175,266,444	18.98	13,138,197	64,206,935	0.20462	28,116,020	1,191,788	64,206,935	0.46	
Arcadis	1,739,949,000	21.28	15,886	1,058,364	0.01501	522,071	316,364	1,058,364	0.79	
ASM international	747,362,000	20.43	-	767,798	0.00000	187,667	137,090	767,798	0.42	
ASML Holding	2,953,678,000	21.81	6,225	3,939,394	0.00158	1,008,343	966,145	3,939,394	0.50	
Balast Nedam	1,426,000,000	21.08	36	1,004	0.03586	660	176	1,004	0.83	
BAM Groep KON	8,834,766,000	22.90	244,569	6,741,933	0.03628	3,690,819	2,197,983	6,741,933	0.87	
Batenburg Beheer	155,953,000	18.87	-	75,225	0.00000	27,734	1,342	75,225	0.39	
BE Semiconductor	149,399,000	18.82	-	242,879	0.00000	53,029	43,566	242,879	0.40	
Beter Bed	358,565,000	19.70	528	96,978	0.00544	52,527	1,748	96,978	0.56	
BRIL KON	25,713,000	17.06	-	36,897	0.00000	16,560	2,456	36,897	0.52	
Brunel Intervat	714,228,000	20.39	36	235,410	0.00015	162,727	-	235,410	0.69	
CSM	2,599,300,000	21.68	10	2,107	0.00489	386	779	2,107	0.55	
CTAC	72,320,000	18.10	356	50,984	0.00698	20,457	7,774	50,984	0.55	
AND international	3,600,000	15.10	-	18,608	0.00000	2,264	1,663	18,608	0.21	
DPA Group	70,207,000	18.07	-	51,667	0.00000	25,183	5,241	51,667	0.59	
DSM KON	9,297,000,000	22.95	195	9,653	0.02020	2,708	2,250	9,653	0.51	
EXACT Holding	260,973,000	19.38	-	238,561	0.00000	84,721	14,457	238,561	0.42	
Fornix Biosciences	39,826,000	17.50	-	60,398	0.00000	8,188	297	60,398	0.14	
GRONTMIJ	844,478,000	20.55	38,876	627,344	0.06197	321,956	130,445	627,344	0.72	
HEIMANS	3,630,990,000	22.01	84,923	2,219,830	0.03826	1,157,182	691,952	2,219,830	0.83	
HEINEKEN	14,319,000,000	23.38	1,786	20,563	0.08686	5,058	10,753	20,563	0.77	
HES BEHEER	78,292,000	18.18	29,829	102,927	0.28981	23,599	9,101	102,927	0.32	
HITT	30,847,000	17.24	-	27,648	0.00000	11,096	2,336	27,648	0.49	
HOLLAND COLOURS	60,176,000	17.91	-	44,315	0.00000	15,749	8,826	44,315	0.55	
ICT Automatisering	97,490,000	18.40	30	65,221	0.00046	18,733	1,234	65,221	0.31	
IMTECH	3,859,443,000	22.07	3,196	2,473,314	0.00129	1,522,474	551,645	2,473,314	0.84	
KENDRION	207,400,000	19.15	-	281	0.00000	153	34	281	0.67	
KPN	14,602,000,000	23.40	187	23,913	0.00782	5,761	14,357	23,913	0.84	

MACINTOSH Retail	1,186,451,000	20.89	2,499	626,777	0.00399	188,342	236,912	626,777	0.68	
MEDIQ	2,730,225,000	21.73	7,039	1,117,075	0.00630	416,246	321,784	1,117,075	0.66	
NEDAP	142,966,000	18.78	2,158	103,160	0.02092	23,568	21,615	103,160	0.44	
NUTRECO	4,943,100,000	22.32	14	2,188	0.00658	1,030	493	2,188	0.70	
Neways Electronics	242,776,000	19.31	-	102,110	0.00000	50,578	5,300	102,110	0.55	
OCE	2,908,960,000	21.79	10,677	2,548,889	0.00419	804,986	1,063,392	2,548,889	0.73	
OCTOPLUS	16,923,000	16.64	-	31,222	0.00000	18,372	12,275	31,222	0.98	
Oranjewoud A	363,081,000	19.71	7,048	219,386	0.03213	95,809	14,845	219,386	0.50	
ORDINA	696,500,000	20.36	7	461	0.01477	260	37	461	0.65	
Philips	25,419,000,000	23.96	1,615	33,041	0.04888	8,928	7,824	33,041	0.51	
Porceleyne Fles	10,008,000	16.12	-	20,546	0.00000	8,955	1,086	20,546	0.49	
PUNCH Grapghix	177,218,000	18.99	21,149	297,044	0.07120	59,298	54,335	297,044	0.38	
Qurius	126,187,000	18.65	6,047	118,582	0.05099	62,406	5,480	118,582	0.57	
Randstad	14,038,400,000	23.37	76	7,723	0.00984	2,365	2,937	7,723	0.69	
ROODMICROTEC	13,057,000	16.38	-	14,675	0.00000	6,663	3,880	14,675	0.72	
REED Elsevier	6,721,000,000	22.63	149	13,251	0.01124	4,231	8,008	13,251	0.92	
ROTO SMEETS	447,547,000	19.92	1,157	288,630	0.00401	104,441	53,770	288,630	0.55	
SBM OFFSHORE	3,060,276,000	21.84	420,441	4,344,994	0.09676	1,637,756	1,466,303	4,344,994	0.71	
SIMAC Techniek	146,644,000	18.80	584	65,984	0.00885	15,047	6,621	65,984	0.33	
SLIGRO FOOD GROUP	2,167,585,000	21.50	41,327	875,153	0.04722	261,154	187,984	875,153	0.51	
STERN GROEP	858,759,000	20.57	13,862	541,259	0.02561	279,270	130,636	541,529	0.76	
SWEDISH AUTOMOBILE	7,852,000	15.88	-	60,542	0.00000	18,683	16,946	60,452	0.59	
TELEGRAAF MEDIA GR	688,072,000	20.35	71,833	762,016	0.09427	245,932	101,239	762,016	0.46	
TEN CATE	1,032,600,000	20.76	11	889	0.01226	162	355	889	0.58	
TIE Holding	9,853,000	16.10	1,940	7,431	0.26107	4,949	298	7,431	0.71	
TKH Group	997,036,000	20.72	3,417	721,559	0.00474	245,847	182,219	721,559	0.59	
TOMTOM	1,674,013	14.33	38,640	2,766,690	0.01397	721,891	1,531,426	2,766,690	0.81	
Unilever	40,523,000,000	24.43	1,068	22,342	0.04780	13,800	11,970	22,342	1.15	
UNIT4	393,590,000	19.79	14,057	476,664	0.02949	183,084	190,553	476,664	0.78	
USG People	4,024,965,000	22.12	58,667	1,967,227	0.02982	740,391	555,657	1,967,227	0.66	
VOPAK	939,300,000	20.66	433	2,634	0.16422	484	115	2,634	0.23	
WAVIN	1,581,200,000	21.18	21	1,376	0.01534	390	652	1,376	0.76	
Wegener	693,288,000	20.36	7,400	787,550	0.00940	395,476	85,896	787,550	0.61	
WESSANEN KON	1,608,500,000	21.20	1	912	0.00066	282	258	912	0.59	
WITTE MOLEN	20,333,000	16.83	-	10,002	0.00000	5,613	78	10,002	0.57	
WOLTERS KLUWER	3,374,000,000	21.94	71	3,774	0.01881	2,614	-	3,774	0.69	

31-12-2009										
Firm	**Sales**	**LOS**	**Fixed fin.assets**	**Total assets**	**FFA ratio**	**S-T loans**	**L-T loans**	**Total assets**	**Fin. Debt ratio**	**GDP**
Aalberts Industries N.V.	1,404,933,000	21.06	1,838	1,577,907	0.0012	411,178	540,212	1,577,907	0.60	-3.9
Accell Group	572,573,000	20.17	3,911	337,302	0.0116	103,586	81,960	337,302	0.55	
AHOLD KON	27,925,000,000	24.05	1,066,000	13,933,000	0.0765	4,025,000	4,468,000	13,933,000	0.61	
AFC AJAX	67,154,000	18.02	17,700	125,864	0.1406	52,037	3,359	125,864	0.44	
AKZO NOBEL	13,028,000,000	23.29	1,783,000	18,880,000	0.0944	4,554,000	6,081,000	18,880,000	0.56	
AMG	607,212,900	20.22	25,558	567,685	0.0450	190,140	217,648	567,685	0.72	
Amsterdam Commod.	164,518,997	18.92	11,946,603	71,892,215	0.1662	28,206,445	4,304,230	71,892,215	0.45	
Arcadis	1,785,773,000	21.30	26,432	1,315,153	0.0201	564,564	382,052	1,315,153	0.72	
ASM international	590,739,000	20.20	50	851,700	0.0001	228,832	236,955	851,700	0.55	
ASML Holding	1,596,063,000	21.19	21,553	3,764,151	0.0057	1,044,170	945,213	3,764,151	0.53	
Balast Nedam	1,384,000,000	21.05	103	1,034	0.0996	644	228	1,034	0.84	
BAM Groep KON	8,324,160,000	22.84	262,222	6,808,841	0.0385	3,833,011	2,094,616	6,808,841	0.87	
Batenburg Beheer	135,641,000	18.73	-	77,182	0.0000	29,491	1,316	77,182	0.40	
BE Semiconductor	147,891,000	18.81	-	269,540	0.0000	73,356	39,908	269,540	0.42	
Beter Bed	361,470,000	19.71	1,038	109,077	0.0095	45,209	8,816	109,077	0.50	
BRIL KON	261,241,000	19.38	-	37,227	0.0000	15,265	1,994	37,227	0.46	
Brunel Intervat	738,437,000	20.42	111,411	254,728	0.4374	67,916	453	254,728	0.27	
CSM	2,555,900,000	21.66	11	2,004	0.0053	616	390	2,004	0.50	
CTAC	68,366,000	18.04	-	43,902	0.0000	19,574	5,967	43,902	0.58	
AND international	5,001,000	15.43	-	23,096	0.0000	1,918	1,901	23,096	0.165	
DPA Group	51,337,000	17.75	-	36,776	0.0000	16,742	7,110	36,776	0.65	
DSM KON	7,866,000,000	22.79	251	9,614	0.0261	1,972	2,631	9,614	0.48	
EXACT Holding	232,516,000	19.26	-	230,251	0.0000	83,338	8,351	230,251	0.40	
Fornix Biosciences	37,756,000	17.45	-	61,191	0.0000	6,087	294	61,191	0.10	
GRONTMIJ	799,800,000	20.50	40,942	596,179	0.0687	323,131	105,218	596,179	0.72	
HEIMANS	3,078,739,000	21.85	90,413	1,853,407	0.0488	1,061,134	366,448	1,853,407	0.77	
HEINEKEN	14,701,000,000	23.41	1,995	20,180	0.0989	5,356	9,177	20,180	0.72	
HES BEHEER	66,478,000	18.01	34,537	111,488	0.3098	21,113	9,619	111,488	0.28	
HITT	32,296,000	17.29	-	26,790	0.0000	7,967	2,216	26,790	0.38	
HOLLAND COLOURS	53,337,000	17.79	-	40,462	0.0000	19,317	2,504	40,462	0.54	
ICT Automatisering	79,090,000	18.19	-	59,715	0.0000	17,360	966	59,715	0.31	
IMTECH	4,323,300,000	22.19	3	2,584	0.0012	1,524	559	2,584	0.81	
KENDRION	149,200,000	18.82	-	153	0.0000	31	26	153	0.37	
KPN	13,509,000,000	23.33	318	24,851	0.0128	5,221	15,756	24,851	0.84	

MACINTOSH Retail	1,116,620,000	20.83	2,178	593,457	0.0037	190,793	168,672	593,457	0.61	
MEDIQ	2,602,712,000	21.68	7,192	1,139,435	0.0063	462,470	222,858	1,139,435	0.60	
NEDAP	115,191,000	18.56	2,222	102,337	0.0217	33,677	22,159	102,337	0.55	
NUTRECO	4,511,700,000	22.23	20	2,125	0.0093	941	444	2,125	0.65	
Neways Electronics	188,438,000	19.05	-	91,592	0.0000	46,445	4,724	91,592	0.56	
OCE	2,647,562,000	21.70	12,332	2,207,180	0.0056	703,608	924,352	2,207,180	0.74	
OCTOPLUS	19,046,000	16.76	-	29,741	0.0000	8,082	10,316	30,138	0.61	
Oranjewoud A	412,003,000	19.84	2,200	265,908	0.0083	124,633	19,914	265,908	0.54	
ORDINA	542,311,000	20.11	516	400,669	0.0013	141,046	75,483	400,669	0.54	
Philips	23,189,000,000	23.87	672	30,527	0.0220	8,050	7,833	30,527	0.52	
Porceleyne Fles	23,907,000	16.99	-	19,470	0.0000	7,896	992	19,470	0.46	
PUNCH Grapghix	125,819,000	18.65	20,310	285,428	0.0712	55,607	62,858	285,428	0.42	
Qurius	117,201,000	18.58	391	95,511	0.0041	50,140	2,500	95,511	0.55	
Randstad	12,399,900,000	23.24	83	2,266	0.0366	2,100	1,865	2,266	1.75	
ROODMICROTEC	11,922,000	16.29	1,803	13,713	0.1315	4,183	6,415	13,713	0.77	
REED Elsevier	6,071,000,000	22.53	135	11,334	0.0119	3,864	5,706	11,334	0.84	
ROTO SMEETS	415,387,000	19.84	-	261,868	0.0000	123,448	35,739	261,868	0.61	
SBM OFFSHORE	2,956,545,000	21.81	377,280	4,658,481	0.0810	1,514,209	1,327,440	4,658,481	0.61	
SIMAC Techniek	132,276,000	18.70	732	63,482	0.0115	42,028	5,016	63,482	0.74	
SLIGRO FOOD GROUP	2,286,261,000	21.55	44,411	852,097	0.0521	210,212	159,661	852,196	0.43	
STERN GROEP	828,703,000	20.54	1,297	503,912	0.0026	310,363	58,194	503,912	0.73	
SWEDISH AUTOMOBILE	6,604,000	15.70	-	64,183	0.0000	15,825	45,745	64,183	0.96	
TELEGRAAF MEDIA GR	611,840,000	20.23	136,976	762,796	0.1796	214,590	78,909	762,796	0.38	
TEN CATE	842,100,000	20.55	26	749	0.0341	228	136	749	0.49	
TIE Holding	11,190,000	16.23	1,780	9,076	0.1961	4,990	8	9,076	0.55	
TKH Group	726,436,000	20.40	2,112	642,130	0.0033	237,021	123,249	642,130	0.56	
TOMTOM	1,479,660	14.21	35,888	2,685,760	0.0134	798,915	869,275	2,685,760	0.62	
Unilever	39,823,000,000	24.41	738	25,417	0.0290	11,599	12,881	25,417	0.96	
UNIT4	379,450,000	19.75	14,332	474,397	0.0302	165,628	170,462	474,397	0.71	
USG People	3,001,134,000	21.82	69,561	1,643,630	0.0423	610,116	394,173	1,643,630	0.61	
VOPAK	1,022,000,000	20.75	497	3,136	0.1584	391	1,412	3,136	0.58	
WAVIN	1,159,626,000	20.87	19,847	1,314,669	0.0151	321,449	434,799	1,314,669	0.58	
Wegener	586,334,000	20.19	15,709	699,522	0.0225	207,594	180,224	699,522	0.55	
WESSANEN KON	703,300,000	20.37	3	638	0.0050	449	33	638	0.76	
WITTE MOLEN	16,634,000	16.63	-	8,952	0.0000	4,749	38	8,952	0.53	
WOLTERS KLUWER	3,425,000,000	21.95	41	3,655	0.0112	2,300	1,891	3,655	1.15	

31-12-2010										
Firm	**Sales**	**LOS**	**Fixed fin.assets**	**Total assets**	**FFA ratio**	**S-T loans**	**L-T loans**	**Total assets**	**Fin. Debt ratio**	**GDP**
Aalberts Industries N.V.	1,682,800,000	21.24	2,119	1,777,505	0.0012	513,381	513,409	1,777,505	0.58	1.8
Accell Group	577,226,000	20.17	268	383,934	0.0007	131,588	71,954	383,934	0.53	
AHOLD KON	29,530,000,000	24.11	1,072,000	14,725,000	0.0728	4,092,000	4,723,000	14,725,000	0.60	
AFC AJAX	69,468,000	18.06	14,570	95,828	0.1520	43,687	4,532	95,828	0.50	
AKZO NOBEL	14,640,000,000	23.41	1,977,000	20,094,000	0.0984	5,261,000	5,324,000	20,094,000	0.53	
AMG	742,871,250	20.43	22,789	641,306	0.0355	219,019	246,814	641,306	0.73	
Amsterdam Commod.	374,907,518	19.74	296,944	238,600,493	0.0012	111,117,932	32,778,391	238,600,493	0.60	
Arcadis	2,002,807,000	21.42	30,686	1,424,530	0.0215	363,066	650,269	1,424,530	0.71	
ASM international	1,222,900,000	20.92	50	1,214,117	0.0000	424,282	142,608	1,214,117	0.47	
ASML Holding	4,507,938,000	22.23	12,648	6,180,358	0.0020	2,155,816	1,250,634	6,180,358	0.55	
Balast Nedam	1,359,000,000	21.03	169	1,084	0.1559	598	325	1,084	0.85	
BAM Groep KON	7,610,742,000	22.75	259,244	7,133,847	0.0363	3,716,159	2,316,055	7,133,847	0.85	
Batenburg Beheer	142,478,000	18.77	-	79,215	0.0000	29,042	1,514	79,215	0.39	
BE Semiconductor	351,149,000	19.68	-	350,484	0.0000	98,742	32,730	350,484	0.38	
Beter Bed	374,724,000	19.74	1,206	113,977	0.0106	46,202	6,924	113,977	0.47	
BRIL KON	27,054,000	17.11	-	38,867	0.0000	13,798	2,003	38,867	0.41	
Brunel Intervat	720,924,000	20.40	142,160	294,190	0.4832	83,737	454	294,190	0.29	
CSM	2,990,100,000	21.82	11	2,627	0.0040	1,023	487	2,627	0.57	
CTAC	71,402,000	18.08	-	50,098	0.0000	24,236	7,267	50,098	0.63	
AND international	6,975,000	15.76	-	246,666	0.0000	1,691	1,112	24,666	0.11	
DPA Group	36,272,000	17.41	-	32,886	0.0000	13,212	5,989	32,886	0.58	
DSM KON	9,050,000,000	22.93	295	10,480	0.0281	2,333	2,570	10,480	0.47	
EXACT Holding	228,200,000	19.25	-	239,031	0.0000	84,850	7,960	239,031	0.39	
Fornix Biosciences	22,482,000	16.93	-	22,186	0.0000	2,994	-	22,186	0.13	
GRONTMIJ	716,220,000	20.39	41,010	874,099	0.0469	431,138	285,160	874,099	0.82	
HEIMANS	2,680,427,000	21.71	80,830	1,599,666	0.0505	874,253	270,383	1,599,666	0.72	
HEINEKEN	16,133,000,000	23.50	2,776	26,549	0.1046	5,623	10,409	26,549	0.60	
HES BEHEER	75,825,000	18.14	43,792	141,926	0.3086	24,410	24,746	141,926	0.35	
HITT	36,234,000	17.41	-	31,293	0.0000	11,817	2,185	31,293	0.45	
HOLLAND COLOURS	51,037,000	17.75	-	39,229	0.0000	14,179	5,064	39,229	0.49	
ICT Automatisering	84,536,000	18.25	-	69,410	0.0000	20,542	641	69,410	0.31	
IMTECH	4,480,900,000	22.22	2	3,046	0.0007	1,473	757	3,046	0.73	
KENDRION	221,900,000	19.22	-	177	0.0000	47	16	177	0.35	
KPN	13,398,000,000	23.32	370	22,737	0.0163	5,419	13,802	22,737	0.85	

MACINTOSH Retail	1,130,939,000	20.85	1,525	608,710	0.0025	209,741	128,187	608,710	0.56	
MEDIQ	2,633,940,000	21.69	7,204	1,195,813	0.0060	429,927	255,663	1,195,813	0.57	
NEDAP	133,558,000	18.71	2,537	112,972	0.0225	36,964	22,519	112,972	0.53	
NUTRECO	4,939,700,000	22.32	22	2,364	0.0093	1,226	318	2,364	0.65	
Neways Electronics	254,462,000	19.35	-	109,560	0.0000	58,376	5,004	109,560	0.58	
OCE	2,860,026,000	21.77	10,864	2,141,688	0.0051	1,222,274	431,276	2,141,688	0.77	
OCTOPLUS	83,290,000	18.24	-	25,347	0.0000	7,116	9,296	25,347	0.65	
Oranjewoud A	698,974,000	20.37	252,834	1,283,899	0.1969	711,292	401,218	1,283,899	0.87	
ORDINA	455,922,000	19.94	300	346,130	0.0009	103,924	62,458	346,130	0.48	
Philips	26,385,000,000	24.00	660	32,269	0.0205	10,758	6,419	32,269	0.53	
Porceleyne Fles	24,795,000	17.03	-	21,080	0.0000	10,077	1,167	21,080	0.53	
PUNCH Grapghix	143,011,000	18.78	21,083	270,803	0.0779	49,670	50,265	270,803	0.37	
Qurius	98,465,000	18.41	353	83,181	0.0042	46,955	274	83,181	0.57	
Randstad	14,179,300,000	23.38	76	7,039	0.0107	2,498	1,689	7,039	0.59	
ROODMICROTEC	15,563,000	16.56	1,665	13,726	0.1213	4,521	3,558	13,726	0.59	
REED Elsevier	6,055,000,000	22.52	136	11,158	0.0122	3,897	5,291	11,158	0.82	
ROTO SMEETS	345,860,000	19.66	-	229,104	0.0000	111,587	38,396	229,104	0.65	
SBM OFFSHORE	3,055,761,000	21.84	238,739	5,090,987	0.0469	1,386,702	1,580,880	5,090,987	0.58	
SIMAC Techniek	137,861,000	18.74	3,584	65,917	0.0544	41,900	4,066	65,917	0.70	
SLIGRO FOOD GROUP	2,286,261,000	21.55	49,401	937,310	0.0527	231,623	205,614	937,310	0.47	
STERN GROEP	920,375,000	20.64	9,514	496,766	0.0192	301,815	46,158	496,766	0.70	
SWEDISH AUTOMOBILE	819,235,000	20.52	1,146	1,077,682	0.0011	644,335	636,557	1,077,682	1.19	
TELEGRAAF MEDIA GR	892,297,000	20.61	199,436	796,681	0.2503	193,475	69,654	796,681	0.33	
TEN CATE	984,500,000	20.71	15	891	0.0172	227	228	891	0.51	
TIE Holding	11,013,000	16.21	1,476	8,236	0.1792	4,197	11	8,236	0.51	
TKH Group	893,520,000	20.61	11,346	676,786	0.0168	251,892	105,864	676,786	0.53	
TOMTOM	1,521,083	14.23	29,985	2,622,758	0.0114	834,227	647,002	2,622,758	0.56	
Unilever	44,262,000,000	24.51	607	27,561	0.0220	13,606	12,483	27,561	0.95	
UNIT4	421,738,000	19.86	17,787	568,903	0.0313	190,468	151,464	568,903	0.60	
USG People	3,098,630,000	21.85	77,762	1,676,561	0.0464	666,174	269,589	1,676,561	0.56	
VOPAK	1,114,800,000	20.83	616	3,831	0.1607	619	1,662	3,831	0.60	
WAVIN	1,231,252,000	20.93	21,956	1,360,894	0.0161	347,152	434,796	1,360,894	0.57	
Wegener	531,442,000	20.09	5,345	658,381	0.0081	163,620	216,434	658,381	0.58	
WESSANEN KON	712,200,000	20.38	2	392	0.0041	146	62	392	0.53	
WITTE MOLEN	12,363,000	16.33	-	7,992	0.0000	4,350	4	7,992	0.54	
WOLTERS KLUWER	3,556,000,000	21.99	-	4,177	0.0000	2,546	2,141	4,177	1.12	

APPENDIX 2: SECTOR DISTRIBUTION

#	Industrial sector
1	Aalberts Industries N.V.
2	AMG
3	Arcadis
4	Balast Nedam
5	BAM Groep KON
6	Batenburg Beheer
7	Brunel Intervat
8	DPA Group
9	GRONTMIJ
10	HEIMANS
11	HES BEHEER
12	HITT
13	IMTECH
14	KENDRION
15	NEDAP
16	Neways Electronics
17	Oranjewoud A
18	PUNCH Graphix
19	Randstad
20	ROTO SMEETS
21	TEN CATE
22	TKH Group
23	USG People
24	VOPAK
25	WAVIN

#	Consumer goods
26	Accell Group
27	Amsterdam Commod.
28	CSM
29	HEINEKEN
30	NUTRECO
31	Philips
32	Porceleyne Fles
33	SWEDISH AUTOMOBILE
34	Unilever
35	WESSANEN KON
36	WITTE MOLEN

#	Consumer services
37	AHOLD KON
38	AFC AJAX
39	Beter Bed
40	BRIL KON
41	AND international
42	MACINTOSH Retail
43	MEDIQ
44	REED Elsevier
45	SLIGRO FOOD GROUP
46	STERN GROEP
47	TELEGRAAF MEDIA GR
48	Wegener
49	WOLTERS KLUWER

#	Basic materials
50	AKZO NOBEL
51	DSM KON
52	HOLLAND COLOURS

#	Technology
53	ASM international
54	ASML Holding
55	BE Semiconductor
56	CTAC
57	EXACT Holding
58	ICT Automatisering
59	OCE
60	ORDINA
61	Qurius
62	ROODMICROTEC
63	SIMAC Techniek
64	TIE Holding
65	TOMTOM
66	UNIT4

#	Health Care
67	Fornix Biosciences
68	OCTOPLUS

#	Telecom
69	KPN

#	Oil & Gas
70	SBM OFFSHORE

APPENDIX 3 THE POOLED OLS REGRESSIONS RESULTS

Pooled OLS regression for AR and ROA

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Linear regression                                      Number of obs =     350
                                                       F( 15,   334) =    6.26
                                                       Prob > F      =  0.0000
                                                       R-squared     =  0.2832
                                                       Root MSE      =  .11811

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|                     Beta
-------------+----------------------------------------------------------------
          ar |  -.0006299   .0003309    -1.90   0.058                -.3007964
         los |    .019227    .003983     4.83   0.000                 .3197149
         fdr |  -.1932207   .0489836    -3.94   0.000                -.2811311
       gdpgr |   .0057308   .0025552     2.24   0.026                 .1170614
 industrials |   -.059744    .029796    -2.01   0.046                -.2100553
consumer_g~s |  -.0881545   .0344211    -2.56   0.011                -.2354129
consumer_s~s |  -.0463282   .0339004    -1.37   0.173                -.1321958
basic_mate~s |  -.0854948   .0403651    -2.12   0.035                -.1270576
  technology |  -.0648314   .0317645    -2.04   0.042                -.1849939
 health_care |  -.0997627   .1031489    -0.97   0.334                -.1219554
     telecom |  -.0482551   .0342509    -1.41   0.160                -.0420176
     oil_gas |  -.0659147    .031562    -2.09   0.038                -.0573945
          y1 |   .0142429    .021765     0.65   0.513                 .0418042
          y2 |  (dropped)
          y3 |  -.0326063   .0198011    -1.65   0.101                -.0957023
          y4 |  (dropped)
          y5 |  -.0083401    .017694    -0.47   0.638                -.0244788
       _cons |  -.1244636   .0795872    -1.56   0.119                        .
------------------------------------------------------------------------------
```

Pooled OLS regression for INV and ROA

```
Linear regression                                      Number of obs =     345
                                                       F( 15,   329) =    5.41
                                                       Prob > F      =  0.0000
                                                       R-squared     =  0.2715
                                                       Root MSE      =  .09171

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|                     Beta
-------------+----------------------------------------------------------------
         inv |   .0000252   .0000132     1.90   0.058                 .1048706
         los |   .0196032   .0034873     5.62   0.000                 .4198214
         fdr |    -.19434   .0403586    -4.82   0.000                -.3660411
       gdpgr |   .0075903   .0021411     3.55   0.000                 .2022125
 industrials |  -.0650306   .0277206    -2.35   0.020                -.2973971
consumer_g~s |  -.0915901    .034238    -2.68   0.008                -.3171784
consumer_s~s |  -.0388929   .0307862    -1.26   0.207                -.1440872
basic_mate~s |  -.0942869   .0402815    -2.34   0.020                -.1832591
  technology |  -.0765865   .0310502    -2.47   0.014                -.2854298
 health_care |  -.0973374   .0638506    -1.52   0.128                -.1396213
     telecom |   -.051824   .0331238    -1.56   0.119                -.0590292
     oil_gas |  -.0791562   .0309654    -2.56   0.011                -.0901615
          y1 |   .0001542   .0157398     0.01   0.992                 .0005877
```

```
          y2 |  (dropped)
          y3 |  -.0373433   .0160152    -2.33   0.020                -.142365
          y4 |  (dropped)
          y5 |  -.0255483   .0134421    -1.90   0.058               -.0973984
       _cons |  -.1624204   .0577236    -2.81   0.005                       .
------------------------------------------------------------------------------
```

Pooled OLS regression for AP and ROA

```
Linear regression                                      Number of obs =     350
                                                       F( 15,   334) =    5.29
                                                       Prob > F      =  0.0000
                                                       R-squared     =  0.2222
                                                       Root MSE      =  .12303

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|                     Beta
-------------+----------------------------------------------------------------
          ap |   -.000089   .0000474    -1.88   0.061               -.1771782
         los |   .0239259   .0051757     4.62   0.000                .3978509
         fdr |  -.2314038   .0504468    -4.59   0.000               -.3366867
       gdpgr |   .0045665   .0029914     1.53   0.128                .0932797
 industrials |   -.066082   .0261242    -2.53   0.012               -.2323393
consumer_g~s |  -.1014591   .0395329    -2.57   0.011               -.2709421
consumer_s~s |  -.0260775   .0275655    -0.95   0.345               -.0744111
basic_mate~s |  -.0971018   .0404871    -2.40   0.017               -.1443074
  technology |  -.0691907   .0271961    -2.54   0.011               -.1974332
 health_care |  -.0762007   .0961706    -0.79   0.429               -.0931518
     telecom |   .0761852   .0705779     1.08   0.281                .0663374
     oil_gas |  -.0765054   .0298908    -2.56   0.011               -.0666162
          y1 |   .0147153   .0235001     0.63   0.532                .0431906
          y2 |  (dropped)
          y3 |  -.0277249   .0213758    -1.30   0.196               -.0813752
          y4 |  (dropped)
          y5 |  -.0014419   .0191333    -0.08   0.940               -.0042321
       _cons |  -.2281989   .0833732    -2.74   0.007                       .
------------------------------------------------------------------------------
```

Pooled OLS regression for CCC and ROA

```
Linear regression                                      Number of obs =     348
                                                       F( 15,   332) =    5.15
                                                       Prob > F      =  0.0000
                                                       R-squared     =  0.2112
                                                       Root MSE      =  .10569

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|                     Beta
-------------+----------------------------------------------------------------
         ccc |   .0000413   .0000352     1.17   0.242                .101467
         los |   .0201875   .0035803     5.64   0.000               .3900793
         fdr |  -.1877372   .0421014    -4.46   0.000               -.3210611
       gdpgr |   .0075809   .0021513     3.52   0.000                .181669
 industrials |  -.0560138   .0254739    -2.20   0.029               -.2312022
consumer_g~s |  -.0742502   .0305425    -2.43   0.016               -.2312903
consumer_s~s |  -.0221227   .0275677    -0.80   0.423               -.0741785
basic_mate~s |  -.0763853   .0367558    -2.08   0.038               -.1334649
  technology |  -.0619419   .0278561    -2.22   0.027               -.2076939
 health_care |  -.0058844   .0807372    -0.07   0.942               -.0080355
     telecom |    .023351   .0540119     0.43   0.666                .0239071
     oil_gas |  -.0590039   .0272715    -2.16   0.031               -.0604091
          y1 |  -.0084028   .0177682    -0.47   0.637               -.0289791
```

```
          y2 |  (dropped)
          y3 |   -.046038   .0176661    -2.61   0.010               -.1587732
          y4 |  (dropped)
          y5 |  -.0169254   .0153253    -1.10   0.270               -.0583712
       _cons |  -.1949896   .0602877    -3.23   0.001                       .
------------------------------------------------------------------------------
```

APPENDIX 4 THE RESULTS OF THE FIXED EFFECTS MODEL

Fixed effects model regression of ROA and AR

```
xtreg roa ar los fdr gdpgr y1 y2 y3 y4 y5, fe robust

Fixed-effects (within) regression               Number of obs      =       345
Group variable (i): firm1                       Number of groups   =        70

R-sq:  within  = 0.1972                         Obs per group: min =         4
       between = 0.1601                                        avg =       4.9
       overall = 0.1402                                        max =         5

                                                F(7,268)           =      6.96
corr(u_i, Xb)  = -0.5706                        Prob > F           =    0.0000

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ar |   .0002961   .0001547     1.91   0.057    -8.42e-06    .0006006
         los |   .0442825   .0129997     3.41   0.001     .0186879    .0698771
         fdr |  -.1428553   .0493013    -2.90   0.004    -.2399224   -.0457881
       gdpgr |   .0067175   .0017459     3.85   0.000     .0032801     .010155
          y1 |   .0039127   .0127545     0.31   0.759    -.0211991    .0290246
          y2 |  (dropped)
          y3 |  -.0355203   .0121313    -2.93   0.004     -.059405   -.0116356
          y4 |  (dropped)
          y5 |  -.0209211   .0107321    -1.95   0.052    -.0420511    .0002089
       _cons |  -.7806556   .2629111    -2.97   0.003     -1.29829   -.2630217
-------------+----------------------------------------------------------------
     sigma_u |  .09199287
     sigma_e |  .07144571
         rho |  .62376189   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Fixed effects model regression of ROA and INV

```
xtreg roa inv los fdr gdpgr y1 y2 y3 y4 y5, fe robust

Fixed-effects (within) regression               Number of obs      =       347
Group variable (i): firm1                       Number of groups   =        70

R-sq:  within  = 0.1674                         Obs per group: min =         4
       between = 0.2082                                        avg =       5.0
       overall = 0.1699                                        max =         5

                                                F(7,270)           =      5.93
corr(u_i, Xb)  = -0.2207                        Prob > F           =    0.0000

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         inv |  -.0000935   .0000779    -1.20   0.231    -.0002469    .0000598
         los |    .026577   .0145399     1.83   0.069     -.002049    .0552031
         fdr |  -.1552744   .0530635    -2.93   0.004    -.2597453   -.0508036
       gdpgr |   .0073355   .0018361     4.00   0.000     .0037206    .0109503
          y1 |   .0027624   .0136242     0.20   0.839    -.0240608    .0295855
          y2 |  (dropped)
          y3 |  -.0441745   .0146485    -3.02   0.003    -.0730142   -.0153348
          y4 |  (dropped)
          y5 |  -.0165336   .0122569    -1.35   0.178    -.0406648    .0075976
       _cons |  -.3879755   .2942529    -1.32   0.188    -.9672973    .1913463
-------------+----------------------------------------------------------------
     sigma_u |  .07645028
     sigma_e |  .08135105
         rho |   .4689733   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Fixed effects model regression of ROA and AP

```
xtreg roa ap los fdr gdpgr y1 y2 y3 y4 y5, fe robust

Fixed-effects (within) regression               Number of obs      =       347
Group variable (i): firm1                       Number of groups   =        70

R-sq:  within  = 0.1627                         Obs per group: min =         4
       between = 0.1876                                        avg =       5.0
       overall = 0.1511                                        max =         5

                                                F(7,270)           =      5.96
corr(u_i, Xb)  = -0.3457                        Prob > F           =    0.0000

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ap |   .0000364   .0000588     0.62   0.537    -.0000795    .0001522
         los |   .0328647   .0125494     2.62   0.009     .0081576    .0575717
         fdr |  -.1519568   .0521517    -2.91   0.004    -.2546325   -.0492812
       gdpgr |   .0070212   .0018005     3.90   0.000     .0034765    .0105659
          y1 |   .0038376   .0133207     0.29   0.773     -.022388    .0300632
          y2 |  (dropped)
          y3 |  -.0438392    .014555    -3.01   0.003     -.072495   -.0151834
          y4 |  (dropped)
          y5 |  -.0153319   .0126926    -1.21   0.228    -.0403208    .0096571
       _cons |    -.53079   .2507088    -2.12   0.035    -1.024383   -.0371973
-------------+----------------------------------------------------------------
     sigma_u |  .08071812
     sigma_e |  .08157913
         rho |  .49469503   (fraction of variance due to u_i)
```

Fixed effects model regression of ROA and CCC

```
xtreg roa ccc fdr gdpgr y1 y2 y3 y4 y5, fe robust

Fixed-effects (within) regression               Number of obs      =       347
Group variable (i): firm1                       Number of groups   =        70

R-sq:  within  = 0.1552                         Obs per group: min =         4
       between = 0.0183                                        avg =       5.0
       overall = 0.0625                                        max =         5

                                                F(6,271)           =      5.93
corr(u_i, Xb)  = -0.2109                        Prob > F           =    0.0000

------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         ccc |  -.0000938   .0000569    -1.65   0.100    -.0002059    .0000182
         fdr |  -.1446988   .0529825    -2.73   0.007    -.2490085   -.0403892
       gdpgr |   .0073708   .0018406     4.00   0.000     .0037471    .0109944
          y1 |  -.0004617   .0132515    -0.03   0.972    -.0265507    .0256273
          y2 |  (dropped)
          y3 |  -.0431877   .0147099    -2.94   0.004    -.0721478   -.0142276
          y4 |  (dropped)
          y5 |  -.0128293   .0123358    -1.04   0.299    -.0371154    .0114568
       _cons |   .1273478   .0315507     4.04   0.000     .0652322    .1894635
-------------+----------------------------------------------------------------
     sigma_u |   .0860475
     sigma_e |  .08179568
         rho |  .52531588   (fraction of variance due to u_i)
------------------------------------------------------------------------------

.
```