Working capital management as a routine: An action based access to the topic

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In times of unstable capital markets on the one side and historically low interests on the other, working capital management must be discussed from different perspectives. Limited sources of liquidity, and the high refinancing risk of lending companies, make the reduction of current assets and liabilities an even more important management task than before. On the other hand, low interest rates raise the need for defining the optimum level for working capital. Little research and empirical evidence exists when it comes to lifting working capital targets to create value.

The objective of the present paper is to give evidence on whether German companies adapt their behavior in terms of handling working capital in the actual economic environment and to describe which practices have been established to perform this adaptation. The given analysis is based on a qualitative study. The data used have been gathered in 2014 and 2015 during semi structured interviews with CFOs or financial executives of 15 German and Austrian industrial firms. Our study suggests that adaptation is realized rather by moderating management attention and focus to the topic of capital cost but not by adjusting the financial targets themselves. This is because working capital reduction as become a management routine.

JEL Classifications: G39, L21, M 6, M 19, M 21

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Introduction

Managing working capital is an attitude not simply the application of models. It’s a management routine. The management of current assets and liabilities has traditionally been paid much attention by German managers. Capital market instability and interest rate fluctuation has made it an even more important management task than before. Incentive schemes reflect the priority of minimizing capital employment. Today, the European business environment is extraordinary in some respects.

On the one hand, due to limited sources of liquidity, and the high refinancing risk of lending companies, the management of current assets and liabilities are significant in generating cash and minimizing the financing risk of capital employment for profitable investments. On the other hand, historically low costs of capital contest the working capital reduction dictum. Limited profitable and riskless alternative investments raise the question whether an extension of working capital could even help to generate additional revenue and support economic value added (EVA) maximization, due to the often forgotten impact of working capital on investor perception of company risk.

Even the term “structure of interest rates”, suggesting that short-term financing should usually be cheaper than long-term financing, is not regularly the case today. The research questions raised in the presented paper are:
1. Is there a practical use for working capital concepts in a business context? Is working capital precisely defined when used as a key performance indicator?

2. Does the actual situation on the capital markets have an impact on setting targets for working capital? Is a deliberate increase of working capital conceivable within target setting? Is working capital target setting subject to optimization?

3. Is the economic value added framework used to explain and influence the interaction of working capital management with a company’s overall goal of shareholder value creation?

It starts with a literature review of more recent existing multi-layer research on the topic. It selects papers, which relate to the specific situation of German industrial companies, since these are the focus of the empirical study presented here. It then presents the methodology of the empirical research, underlying this study, and develops four summarizing propositions which are discussed in the last part of the article.

The current paper is structured as follows. In the beginning the literature review of more recent existing multi-layer research on the topic is presented. We select papers, which relate to the specific situation of German industrial companies, since these are the focus of the empirical study presented here. Also a categorization of existing working capital research is made. The actual business situation in Germany is described with a special focus on interest rates and loan demand of German industrial firms. Further section describes the employed methodology. Then the four propositions represent the findings of the present research with the subsequent discussion and conclusion.

**Literature review**

Existing literature on the topic can be classified in different ways, e.g. methods used, empirical archival or analyzed management practices. Our study categorizes the literature according to the impact of working capital management on financial ratios which dominates the respective research fields. Three main areas of research emerge.

**Working capital in the context of a company’s structural liquidity**

The first large field of comprehensive working capital studies is cash-related research. Working capital is analyzed in the context of cash, cash generation and consumption, often measured by the number of days of the working capital cycle (DWCC) (Pfitzner and Hilbert, 2014; Laux, 2012). The asset side of working capital is accentuated more and the elements of trade receivables and inventories are focused. While a definition of working capital (current assets less current liabilities), net working capital (excluding cash and short term debt) and finally net operating working capital (trade receivables plus inventories less trade payables) is easy, its management is not. Growing companies must invest constantly in a certain level of inventory and accounts receivable, with long-term financing becoming appropriate for short term assets, taking into consideration that the latter are not always considered as current assets (Laux 2012). Hill, Kelly, and Highfield (2010) point out that sales growth and costly external financing, amongst other factors, encourage firms to pursue more aggressive working capital strategies. Firms with a greater internal financing capacity and superior capital market access seem to follow a more conservative working capital policy. Molina and Preve (2009) highlight managers’ tendency to increase working capital components, in times of profitability problems, and demonstrate the opposite behavior, in times of cash problems. They highlight this non-beneficial behavior, by explaining that “decreases in the trade receivables account for at least one-third of the drop in performance of firms in financial distress” (p.665). So, purely cash-oriented working capital behavior seems to be questionable.
Working capital as a component of cash flow

The context for such research is predominantly based on the capital side and concentrates on the capital requirements of a company (partly determined by its working capital) and the company’s potential to generate internal financing. “A more accurate intuition of working capital emerges when we define working capital from the liabilities side (as long-term capital minus fixed assets, which is mathematically equivalent). The net result, still on the right side of the balance sheet, can be interpreted as financial component and therefore, as a part of the capital structure decision of the firm” (Etiennot, Preve, and Allende, 2012, p. 163). In other words, working capital represents the amount of long-term funds employed to the financing of current assets. Actively reducing working capital seems to be an appropriate means to generate cash and reduce capital requirements, by employing this cash accordingly. While a firm can be highly profitable, its ability to generate sufficient positive net cash flows from operations will put pressure on management to seek out additional sources of capital to support its working capital needs. External financing is needed to meet the working capital requirements. The cost of financing working capital has to be calculated, in relation to the benefit of holding specific inventory levels or trade credit, to minimize the company’s future dependence on debt financing (Lifland, 2011/2012; Schöning, Rutsch, and Schmid, 2012).

Another stream of literature in this category is country- or industry-specific working capital studies.

For specific businesses and regional areas working capital requirements are analyzed and evaluated. (Arunkumar and Radharamanan, 2012; Garcia, da Silva Martins, and Brandaó, 2011; Goel, 2013; Koralun-Bereznička, 2013; Makarani and Bineshian, 2013; Savita, 2011; Valipur and Jashidi, 2012). The capital needed to finance working capital is also the leading focus of those studies. A more static or structural view of balance sheet ratios, based on hedging aspects, dominates this stream of research. Working capital is interpreted as a source of cash generation, on the one hand, and as the amount of long-term capital devoted to financing current assets (limiting the amount of long-term capital for fixed assets), on the other.

In this rather financing oriented stream of literature, variations of working capital, as an element of cash flow, are part of the highly valued internally-generated financing. If cash flow, as a pool of funds, is to be increased, there is a need for a definition of an adequate or desirable level of remaining working capital. Whilst some authors would even accept a negative working capital, others still believe in optimal level of working capital as a cash reserve. The debate on the absolute or even optimal level of working capital, and its periodic change as source of liquidity, as the outcome of successful working capital management, needs to be further elaborated.

Working capital as a value driver

The group of studies in this context emphasize the possible link of working capital to profitability, using a relatively simplistic perspective. Working capital management is reduced to releasing capital employment and hence increasing liquidity. This liquidity is used for strategic investments, with comparably higher returns, or for the reduction of debt, which in turn reduces capital costs. An explicit return for investing capital in inventory or trade receivables is mostly not considered (Paetzmann, 2008; Woehrmann, Knauer, and Gefken, 2012).

A first step towards a more in-depth analysis of working capital management is to compare returns with the cost of capital employed. “Investments, in current as well as long-term assets, should be undertaken if they will offer the most satisfactory returns to shareholders - measured by net present values discounted at the cost of capital” (Pass and Pike, 1987, p.20). In these cases, defining an adequate level for the weighted average cost
of capital (WACC) is a challenge, as expected returns depend on financial market trends and assumptions.

Even more comprehensive shareholder value-oriented research undertakes an analysis of a company’s profitability, relative to its cost of capital, within the economic value added framework, considering single elements of value creation (Michalski, 2007; 2008). A cause and effect based explanation grid of the implications of the measures (often referred to as working capital management) on EVA could further expand that stream of research.

To briefly summarize existing research, it can be stated that a large variety of multi-faceted research exists. Most papers concentrate on single cause-effect analyses and on the basic assumption that capital employment in working capital delivers a comparably low return. Consequently, working capital management refers to working capital reduction and rarely concentrates on its optimization.

Today, this approach has to be questioned and the topic of working capital management as a management task should be reconsidered.

**Business situation and capital availability of German industrial companies in 2014**

2014 was an economically unspectacular year in the Eurozone. In May, Germany reported an expected growth rate of 2.5%. The actual rate was 1.5% in Germany and 0.8% for Europe overall (Kater, 2014; Stephan 2014).

In industrialized countries, economic environments are mainly influenced by credit cycles, while product life cycles assume a lesser importance. European companies benefited from increased credit volumes, before the credit crisis, but now suffer from the need to decrease leverage. Experts expect Europe to be confronted with the consequences of the credit crisis for years to come. This will translate to moderate growth rates, low investment activity and extremely low interest rates (Kater, 2014). Base rates in the United States and Europe (with a one year delay) have been steadily lowered since the credit crises of 2008 and 2009.

In a low interest environment, such as the situation companies experience today, the basic rules of capital markets still persist: higher returns correlate with higher risk. Developing easy and secure securities constitutes a challenge for the banking sector. Regulatory interventions, such as the MiFID II or Basel III, which aim to restrict credit access, have proved counter-productive in this context. Empirical evidence demonstrates that Basel III has not limited access to credit for large- and medium-sized German companies, but has tightened credit standards for small enterprises (Schlumpberger, 2014; Bundesverband öffentlicher Banken, 2015).

German corporate financing is traditionally dominated by long-term considerations. Companies appreciate the stability of capital costs and the accuracy of planning activities. Today, long-term financing is still available to companies, but due to existing regulations and the existing interest environment it tends to be more costly. In many cases, companies choose shorter term alternatives and carry the risk of prolongation and interest rate increases. Alternatively, internal sources of financing are becoming more attractive. Access to credit is easier in Germany than in other European countries, but German companies still tend to behave rather conservatively, in this respect.

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1 MiFID is the Markets in Financial Instruments Directive (Directive 2004/39/EC). It replaced the Investment Services Directive (ISD) adopted in 1993. Basel III is a set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector. (For detailed explanations see reference list.)
Even though 87 per cent of the credit requests from German companies could be satisfied (Schlumpberger, 2014), the European Central Bank stated in their bank lending survey in April 2014 that "in Germany, increasing net loan demand for both mergers and acquisitions and debt restructuring was largely counterbalanced by declining net loan demand for inventories and working capital" (European Central Bank, 2014).

The following figure demonstrates the developments in credit standards and loan demand for enterprises in the euro area in total and in Germany in 2014. In Germany, the demand for credit and credit standards for loans to enterprises remained unchanged.

**Figure 1. Credit Standards and Loan Demand in the Euro Area in 2014**

![Credit Standards and Loan Demand in the Euro Area in 2014](source: ECB (2014).

The credit standards of European banks are considerably below their historical average, since the start of the survey in 2003 (15%).

Looking at developments by firm size, euro area banks reported unchanged credit standards for loans to small and medium-sized enterprises (0% net tightening, from -3% in the previous quarter), while they reported an easing of standards for loans to large firms (-3%, from 2% in the previous quarter). Regarding loan maturity, credit standards for long-term loans were marginally tightened (with the net percentage of euro area banks at 1%, from 5%), whereas for short-term loans, credit standards were marginally eased (with the net percentage of banks stable at -1%) (European Central Bank, 2014).

The above findings demonstrate that the lower cost of capital and the high disposability of capital have not impacted German companies’ commitment to working capital reduction. This raises the question whether the practice of working capital reduction independent from capital cost is regarded as beneficial in the managers’ perception, e.g. as a value creator, or whether it can be interpreted as routine behavior, without case specific financial foundation.

**Methodology**

This study adopted a qualitative research method to examine the working capital management practices of the respondents. This method is widely accepted in corporate finance research for the purpose of analyzing actors (Silverman, 2009; Qu and Dumay, 2011). Patton (1990) notes that qualitative methods may be employed to discover "what people do, know, think, and feel". Study participants were selected by purposive sampling.

The interviewer invited participants for a personal interview or a telephone interview, both around 30 to 90 minutes long. The criteria for selecting interviewees were that the respondent either had financial target setting competence himself/herself or had insight into the target setting process. The required number of participants was reached when the point of saturation was achieved, whereby additional interviews did not result in any new findings (Creswell, 2006).

Data collection took place within semi-structured interviews. "A semi-structured interview involves questioning guided by identified themes in a consistent and systematic manner.
interposed with probes to elicit more elaborate responses" (Qu and Dumay, 2011, p.9). As Miles and Huberman (1994) state, this approach enables the generation of detailed descriptions grounded in reality. The interview questions were developed on the basis of an in-depth literature review. Interviews were audio recorded, transcribed and memos were written to document important information gathered.

The interviews were analyzed using content analysis techniques (Miles and Huberman, 1994) following several steps. First interviews were analyzed and coded deductively, based on the literature research. The second step was used to categorize text passages into emerging themes. These emergent themes were used to group quotations from transcripts and to eliminate irrelevant passages. This helped to manage data effectively and to have access to quotations to represent participants' own views whenever necessary.

After the coding process, cross-case analysis helped to ensure that the developed themes and categories really represented the participants' perspectives and were not consequences of the researcher's own bias.

Fifteen business finance managers from German large- and medium-sized companies were interviewed before the point of saturation was achieved. One interviewee worked as the CFO of an Austrian group, but has formerly worked in German groups for more than ten years and was regarded as having good insight into German business practices. Additionally, three expert interviews were carried out to deepen the authors' understanding of the current market situation and banking environment in Germany.

The results of the research did not fully correspond to the findings in the literature, nor to the authors' previous understanding of working capital, as a management activity, and demonstrate a previously neglected routine-based dimension of working capital management.

**Findings**

**Proposition 1: Identification of the lack of a precise working capital management definition**

The first outcome of the current research is the lack of precision, when it comes to the definition of the term working capital itself.

While some interview partners address working capital as the “difference between current assets and current liabilities”, others differentiate between “working capital and controlled working capital”. The latter articulated a very tight definition of working capital with “inventory, accounts receivable and payable as main working capital components”. Another differentiation could be found between working capital and net working capital, where net working capital excludes short-term loans and overdraft arrangements, but includes all other parts of current assets and liabilities. In the continuation of the interviews, the researchers concentrated on the narrow definition of working capital being the difference between inventories and accounts receivable minus accounts payable.

When it comes to a more precise description of what the interviewees referred to as working capital management, the concentration on these narrowly defined elements can be affirmed by the following statement of an interview partner: “We concentrate on the elements being actively influenced by operative management first”.

The starting point of working capital management is typically a positive figure, whereas the authors of this paper have the suspicion that this amount is too high in all the analyzed companies. The following statement can be seen as a representative comment in this respect: “Typically firms, especially those in the manufacturing industry, will tend to keep a positive balance...”

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1 The topics covered in these interviews were: WC definition, application of WC as KPI, areas of WC responsibility, organizational localization of WC responsibility, responsibility for KPI target setting, sanctioning of deviations, target adaptation to macro-economic parameters, management focus to WC targets and target fulfillment over time.
which creates cost”. In no case was capital being used to finance inventories or accounts receivable spontaneously assumed to be comparably well invested capital.

The aim of working capital management was described as “the balancing out of working capital needs and the extent of internal cash generation, availability of credit and the relative cost effectiveness of different sources of financing”.

**Proposition 2a: The active manipulation of working capital does not mean optimizing this ratio but setting reduction targets**

As demonstrated, Germany is actually experiencing a historically low interest rate level. According to the theory, this should reduce pressure on working capital and allow companies to invest in higher working capital and hence attain higher profitability. The findings of this research suggest that the impact of working capital reduction on liquidity and profit is acknowledged, but not aligned consciously and not purposefully translated into working capital targets.

Working capital performance improvements were in all cases sought by setting working capital reduction targets. One representative statement demonstrates this trend: “We treat working capital management in the context of cash management. We only measure improvement – hence reduction as percentage of revenue, we do not calculate absolute working capital targets on the basis of interest rates”. Another statement goes in the same direction: “Working capital is a cash reserve. It serves as cash generating balance sheet position but we do not define a minimum requirement of working capital”.

Attention on working capital tends to serve as a general attitude rather than as an analytically-developed integrated financial target system. Even in times of low interest rates, reduction targets are not lowered. This is because on operative managers’ level only working capital is tracked - but not the cost of its financing. This is because operative management is measured on the basis of operative results like EBIT and working capital, and balance sheet performance savings in capital costs do not improve operative managers’ performance.

**Proposition 2b: Managers’ varying attention to working capital goes along with varying interest rates**

Considering the above findings of unchanged targets it might be concluded that the actual low interest rate environment does not impact working capital management practices at all. Being confronted with this assumption, the interviewed partners reacted differently. For some interviewees, reinvestment of available cash was completely out of their scope of responsibilities and thus not an area of interest to them, so they did not really wonder about unchanged working capital targets.

Others were fully aware of that discrepancy between theory and their business practice. Instead of adapted targets they observed a “constant adaptation of management focus”. While in 2008 and before, working capital performance targets were monitored strictly, today “they exist, but are not paid as much attention as previously”. Another interviewee stated: “Yes, of course we have those targets also today. But not meeting them is not at all a problem. It is tacitly accepted that people pay attention to other things actually. But we keep these targets in our systems because we do not want to fully give up this idea.”

Considering these statements the research outlined in this paper discovered that any correlation of working capital levels and interest rates is not a consequence of target adaptation. If working capital stayed unchanged in the analyzed companies between 2013 and 2014, thus if reduction was not achieved, this was not a consequence of adjusted targets in the sense of deliberate working capital increase but it can be assumed that lower management attention to the topic contributed to this development. In other words, targets stayed unchanged but management did not really trace the achievement of these targets.
Proposition 3: The balancing out of profitability and liquidity as proposed in a value based context is not observed in German business practice

Even though value-oriented research on working capital management and the challenge of defining an adequate level of WACC is addressed, as the basis for defining the working capital optimum, no attention is given to this optimum level, as an ex ante target in the literature. The optimum level is determined ex post, through correlation analyses between working capital elements and economic variables.

Consequently, the question asked in the interviews was whether a focus on working capital reduction would not automatically require the definition of an optimum level in parallel. The present research confirms this gap in management thinking. In none of the cases was an optimum working capital level calculated analytically.

One of the interviewees explained that phenomenon: “The working capital is a typical financial ratio without a mathematical optimum. Its optimum is defined via trial and error, so we only highlight changes do not determine absolute levels”.

With reference to the actual situation on capital markets, interviewees were asked about the practical consequences of the current low interest environment on working capital reduction targets. The findings diverged astonishingly from the established literature on this subject: The actual interest rate level had no impact on working capital reduction targets in the analyzed cases.

One finance manager stated “of course, working capital reduction is not really satisfying today, because I hardly find any meaningful investments for the cash, but we want to adhere to the idea of cash awareness and responsibility at all levels of the organization”. Another interviewee reflected: “well, if I think about it properly, it could make sense to even increase working capital nowadays, but we have not even thought about that. We want to preserve the right attitude”.

The above mentioned organizational separation of working capital needs responsibility and the responsibility for its financing reduces working capital to its liquidity dimension whereas payback of investments in working capital are rather not seen and traced back. This is also a consequence key performance indicator tracking. Whereas operative managers are rather measured at EBIT and working capital, treasurers tend to concentrate on EAT. Reduced working capital financing costs in case of low interest rates will not be explicitly traced back to its origins - neither will increased revenue and operating profit not be linked to extended payment terms which does not create pressure to release the existing working capital reduction emphasis.

Discussion and conclusion

Working capital management is a multi-facetted and profoundly re-searched topic. The authors revealed a liquidity focus in much of the research as well as in German business practice.

The current economic environment in German industry is characterized by low interest rates and a high satisfaction rate of credit requirements. This questions the traditional focus on working capital reduction and demands conscious optimization of this ratio.

The present study comes from an action-oriented perspective on working capital management. Management requires action, therefore, a more in-depth investigation, of the steps of action and the attention paid to commercial performance, may advance our understanding of the working capital management process.

The presented findings provide evidence of a traditionally high attention to the liquidity dimension of working capital and reveal a literal working capital reduction tradition in German industry. They give empirical evidence to Deleker’s (2010) statement that working capital management constitutes a communicative concern in the first instance.
Interestingly, our study provides evidence that finance managers in German industrial companies engage in working capital management in a rather intuitive manner, referring to mechanical routinely used practices as:

- emphasizing the cash flow based dimension of working capital;
- concentrating on the changes of working capital not on absolute levels;
- continuing their working capital reduction strategy, independent from interest rates;
- adjusting their attention to working capital target achievement to the ease of access to capital and to the level of interest rates.

Thus, the role of working capital adjustments in value frameworks does not have a direct impact on working capital target setting practices in German industrial companies.

The importance of working capital awareness, as a central business activity also in a low interest rate environment, is accommodated by unchanged targets, but reduced top management attention. Working capital management practices are not profoundly altered, but the reduction of management attention to the topic might attract operative managers’ attention to other, possibly more profitable, areas.

It should be considered that this study only focuses on a small sample of twenty participants and, therefore, generalization of the findings is restricted. Future studies should examine branch based particularities and analyze in more detail how working capital targets are elaborated and how finance managers deal with deviations from those targets.

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Digital sources


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