A Study on Working Capital Management System based on Performance

Mao Jingmeng

***Abstract*—As a main part of financial management, working capital management shows its importance to the enterprise's development. This paper constructs a management system based on the modifying cycle of working capital management performance. Especially, the system includes five elements, they are management goal, business environment, management policy, management mode and management performance. This study aims to offer a theoretical reference for working capital management practices and future researches.**

***Index Terms*—Working capital, performance management, management system.**

I. Introduction

Working capital is the difference between current assets and current liabilities, which is a part of capital that needn't to pay off in the short term. That is, working capital reflects the relative stability of short-term capital. We can be informed on the enterprise's financial risk, by the value of working capital and some related indicators. Generally, the more working capital enterprises own, the less financial risk they may face. However, too much working capital is not suitable for the enterprises who wish a long-term development, as the lost profit. We suggest to enhance the working capital management, for its importance and financial robustness. However, there are rarely researches involved in constructing a working capital management system. To perfect the management process, we propose an efficient working capital management system on performance, which may be a modifying cycle. We hope to provide a reference for the future research and management practices.

II. Reviews

Working capital can be defined in a broad sense and a narrow sense. The broad working capital, also known as the total working capital, is the value of liquid assets. George William Collins [1] pointed out that working capital is the part of current assets exceed current liabilities, which is defined as net working capital [2]. Most researches at home and abroad are based on the net working capital.

As one of the most important parts of financial management, working capital management goal should be consistent with the goal of financial management [3], which is generally recognized in academia. Hyun-Han Shin and Luc Soenen [4] noted that effective working capital management should think of shareholders's value. Li Xiaoqun [5] materialized the management goal as to improve profitability and reduce financial risk. In General, working capital management goal should follow the enterprise's financial goal, to realize the projected cash flows and create value.

Efficient working capital management requires an overall investigation on the environment, like economic environment, industrial characteristics and its own characteristics. Melville and Thvis found that the economic environment is an important affection to the working capital management policy in their study [6]. In addition, it seems that different industries make different working capital management policies according to its economic essence. Lu Lianhua [7] pointed that the ratio of working capital to assets in different industries in United States were varies. Besides, enterprise's own operating conditions and external financing ability were the main reference to Liu Huaiyi [8], when he was examining the management of working capital in retail. This reveals that working capital management should consider macro and micro business environment, rather than a simple figment.

Working capital management policy is about the determination on the amount of current assets items and their finances [9]. Mao Fugen [10] defined it as structured management. He pointed out that working capital management policy should be based on the risk-return, determine the ratio of current assets and current liabilities to total assets respectively, and then to make integrated decision. Furthermore, Mao Fugen [11] divided the working capital management policies into radical, moderate and steady, based on his study above. Each policy corresponds to a certain current assets and current liabilities ratio, which reflects the balance between risk and return.

Efficient working capital management mode may based on distribution channel [12] or value chain [13], which focuses on up and downstream management, as well as the internal production link. The commercial credit helps to accelerate cash flow, then to realize the efficient working capital management. With the opening international markets and a growing application of financial derivatives, Wang Zhuquan [14] introduced several innovative modes for working capital management, such as export credit insurance, repurchase guarantee sales and so on.

Overview the researches at home and abroad, primarily, the methods for performance evaluation are financial assessment and market evaluation [6]. The financial method calculates financial indicators directly. While market method links the working capital management to its operating performance in capital market, then informed the market's acceptance to the management modes. Evaluation indicators went from separate to integral, from the pure financial indicators to financials and non-financials. The integral indicators put working capital into as a whole, such as cash conversion cycle [15] and working capital productivity (BCG). Sun Ying [16] proved out that the quantitative and

Manuscript received August 17, 2012; revised September 23, 2012.
M. Jingmeng is with the Business School, Hunan University, Changsha , China 410079 (email: maojm-2006@163.com).

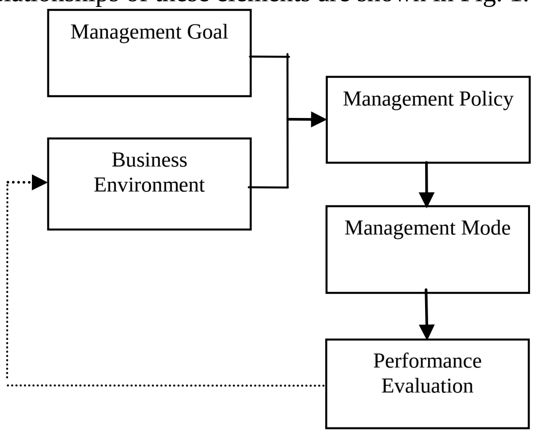
DOI: 10.7763/IJIMT.2013.V4.368

qualitative method is suitable for working capital management performance evaluation.

Although working capital management has been widely accepted by the academia, while, a management system for efficient management practices has not constructed.

III. Working Capital Management System

Constructing a working capital management system is to strengthen the management and make it more systematic. Moreover, an efficient management system should be applicable to all types of working capital management practices, and be constantly reparable. To meet this need, we propose a management system based on the performance management theory. In particular, the system include the following five consistent elements, they are management goal, business environment, management policy, management mode and performance evaluation. The relationships of these elements are shown in Fig. 1.



*solid line arrows indicate the logical sequence between these elements.
**dotted line arrows indicate the modifying cycle.

Fig. 1. The Relationship between five elements of working capital management system

Totally, the overall management system is under the guidance of the goal. Furthermore, its policy is based on the business environment and enterprise's capacity assessment. After execution is working capital management performance evaluation. According to the performance result, we will involve in the modification of working capital management system. The system is a cycle to achieve the long-term improvement of working capital management.

A. Management Goal

Management goal is the center of working capital management system, which provides a guidance to the entire management process. Therefore, clearing the goal of working capital management system is a most important project. We suggest that enterprise's value maximization can be regard as the goals. That reflects the unity between working capital management and financial management, at the same time, it also reflects the service relationship between them. Specifically, we will subdivide the goal into profitability, risk and efficiency.

Some working capital items such as inventory, accounts receivable, accounts payable, accounts payable, accrued wages payable, taxes payable and so on arise from the operating activities, for which are focused on their profitability. Some working capital like cash, securities, dividends receivable, current liabilities, interest payable and so on are about the manifestation of liquidity and debt, which may principal expedition the risk. The management efficiency is mainly reflected through its turnover situation.

B. Business Environment

Assessment the current business environment is a prerequisite to working capital management. In a board sense, there are external and internal environment. Specifically, the environment includes economic situation at home and abroad, like the industrial characteristics, production and sales, cash control and so on. We will know the business demand and operating risk for working capital through the environment assessment, which can help us make targeted working capital management policy.

Industrial characteristics affect working capital requirements in a large extent, as well as the enterprise's own capacity. In General, the working capital requirements in retail may less than that in manufacturer, as their relatively lower value of inventory and the little credit. In addition, the management of accounts payable recovery and bargaining power to upstreams are also important factors. Even if in the same industry, enterprises who can timely receive the receivables or defer payables may own less working capital, because of an efficient turnover. Economic situations at home and abroad such as the national economic recession, inflation, interest rate, exchange rate and so on will also affect working capital items in various ways.

C. Management Policy

Enterprises have to keep a certain amount of working capital to meet their needs, at the same time to spend the cost. Thus, working capital management policy implies a comprehensive consideration of risk and the cost. In accordance with the working capital requirements over time, we divide it into permanent and temporary. Permanent working capital is held for normal operation. While temporary working capital is for the high season. Steady management policies require a certain amount of temporary working capital on low season. And the radical policies relax the requirements for permanent working capital.

The radical working capital management policy spends lower capital cost by increased operating risk. Usually, the enterprises who manage working capital efficiently will gain valuable investment opportunity from the reduced cost. Those who select steady working capital management policy seem to be risk followers. By holding more working capital, enterprises can easily cope with sudden changes, which gains from the high cost. Under the instability external economic environment when the enterprise is counter-measures, the steady policy would be a good choice. Regardless of which management policy, the one is guided by the goal and combined with the business environment, is what we need.

D. Management Mode

The management mode is matched with working capital management policy, which is a specific implementation for the management process. We believe that the mode which concerns on value chain of up and downstream is better, as the most important items in working capital arise from those areas. Strengthen the control of value chain can gain more with less. Direct management for highly-liquid items like cash, short-term debt and so on is also very important, as they are important parts of working capital. To this end, we recommend that the working capital management mode can regard the value chain management as a primacy and the direct management as an aid.

The working capital management mode reflects the risk-attitude of enterprise. Those managers who courage to accept the risk seems to focus on value chain. By improved bargaining power to channels, they can reduce the cash holdings to meet working capital's needs. When the items are not so good on the liquidity, firms tend to hold cash or reduce short-term debt. Direct management allows managers to deal with the risk calmly and catch good investment opportunity.

E. Performance Evaluation

Performance evaluation is a summary of the past working capital management, where we can find problems and prepare for the management process modification. The set indicators to reflect performance, will be taken to compare with the other enterprises' in the industry or its plan, then we can get the information on working capital management performance. To make the results more reliable, we should pay attention on comparability and evaluation useful when choose enterprises for external evaluation. If the enterprise is not comparable, or itself is poor in the management, the working capital performance evaluation seems meaningless.

Evaluation indicators are important elements of the performance evaluation, which are based on the management goal and combine with the operating requirements. Profitability is reflected by the relationship between working capital and cost or revenue. Its main financial indicators are working capital productivity, sales planning ratio and so on. The financial risk of working capital management arises when capital holdings is unable to meet their actual demand. So main indicators are working capital requirements, working capital adequacy ratio and so on. Traditional performance indicators reflects the management efficiency of working capital, like cash conversion cycle, merchandising ratio and so on. In addition, to enhance the channel management, working capital cycle can be divided into procurement, production and marketing channel cycle. So that we will get the information on the operation of different segments. There is no mandatory provision on working capital management performance indicators, but consistent within the industry will contribute to comparison and evaluation.

IV. Working Capital Modifying Cycle

Performance-based working capital management system should be a cycle. Performance evaluation is on the end of the last stage, the results, at the same time, become a beginning of the next stage for management modification. Generally, the modification is start from the business environment assessment, and does not involve the management goal. Unless the operating environment is undergone significant and irreversible changes, and than it changes enterprise's overall strategic goal.

Reassessing the business environment is to ensure that working capital management system can always match to it. For a bad evaluation result, we believe that issues arise in unmatchable management policy or inappropriate implement. To that end, managers need to analyze the source and make adjustments. The unmatchable policy means that working capital management policy isn't suit to the business environment, obviously, we won’t get high performance. Matchable management policy still may fail, if with ineffective implementation. A communication about the working capital management with staff is essentially, to help them acknowledge on the management policy, and implement actively.

Performance management cycle is for the long-term development of enterprise's working capital management, including the modification of the management issues and the consolidation of efficient management. Through continuously management process, modification and consolidation help us reach the final working capital management goal.

V. Conclusion

We choose working capital management process as the study object, and then construct a set of management system based on the performance. For the whole management process in enterprise, management goal is the guidance. A matchable working capital management policy should consider about the internal and external business environment, besides, efficient execution is also needed to get high performance. While, the final goal relays on the modifying cycle of working capital management, which is based on the performance. What's more, it also requires courage to deny and innovate. Totally, the five management elements work together for working capital management.

References

[1] G. W. Collins, “Analysis of Working Capital,” *Accounting Review*, vol. 21, Issue 4, pp. 430-441, 1945.

[2] M. Fu-gen, “The Basic Theory of Working Capital Management,” *Accounting Research*, vol. 1, pp. 38-40, 1995.

[3] J. Feng, “The Development of Working Capital Management Theory in Western Countries,” *Journal of Ocean University Of China* (Social Sciences Edition), vol. 2, pp. 87-90, 2006.

[4] S. Hyun-Han and Luc Soenen, “Efficiency of Working Capital Management and Corporate Profitability,” *Financial Practice and Education*, pp. 37-45, Winter 1988.

[5] L. Xiao-Qun, “Working Capital Management,” *Friends of Accounting*, vol. 12, no. A, pp. 25-26, 2005.

[6] Z. Hong-Hong, “A Review on Working Capital Management,” presented at the Working Capital Management Conference, Qingdao, China, November 18, 2011.

[7] L. Lian-Hua, “Working Capital Management Policy,” *Journal of Chongqing University of Posts and Telecommunications*, vol. 9, pp.48-54, 1988.

[8] L. Huai-Yi, “A Empirical Research on The Influence Factors of Working Capital Management,” *Naikai Economic Studies*, vol. 3, pp.105-114, 2010.

[9] W. Li-Na and Gao Xu-liang, “A Review on Working Capital Management Policy,” *Research of Finance and Accounting*, vol. 17, pp. 50-53, 2008.

[10] M. Fu-Gen, “A Discussion on The Basic Theory of Working Capital Management,” *Accounting Research*, vol. 1, pp. 38-40, 1995.

[11] M. Fu-gen, "A Discussion on Structural Management Theory of Working Capital," *Finance and Accounting Monthly*, vol. 3, pp. 21-22, 1995.

[12] W. Zhu-Quan and Ma Guang-Lin, "Distribution Channel Control: The Focus of Working Capital Management in Cross-regional Enterprises," *Accounting Research*, vol. 6, pp. 28-33, 2005.

[13] Z. Xia and S. Shu-hua, "Working Capital Management System Based on Value Chain," *Communication of Finance and Accounting* (Comprehensiveness Edition), vol. 9, pp. 83-84, 2009.

[14] W. Zhu-quan and L. Wen-jing, "A Survey on Working Capital Management of List Company in China from 2007 to 2008," *Accounting Research*, vol. 9, pp. 51-57, 2009.

[15] H. C. Hager, "Cash Management and the cash Cycle," *Management Accounting*, vol. 3, pp. 19-21, 1976.

[16] S. Ying, "Working Capital: Redefine and Evaluation," presented at the Working Capital Management Conference, Qingdao, China, November 18, 2011.

Mao Jing-meng was born in Taizhou, Zhejiang, China, on 14th April, 1988. She has received the Bachelor of Administration from Business school of Zhongnan University, Changsha, Hunan, China, 2010. And will get the Master of Business Administration from Business school of Hunan University, Changsha, Hunan, China in 2013. The major field of study are management, finance, accounting etc..

Her work experiences are listed as follow: (1) INTERNS in Taizhou Broadcasting Station during Jan. 2012 to Aug. 2012; (2) INTERNS in Vocation (Beijing) International Assets Appraisal co. LTD. Her article named "Performance Evaluation System Research on the Listed Pharmaceutical manufacturing Companies in China" has received the notification from Communication in Finance and Accounting. Her research interest is financial management.