




Research on Working Capital Management of Yuwell Medical from the Perspective of Value Chain

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Abstract. With the continuous improvement of living standards, public attention to personal health has grown significantly. As competition intensifies across nearly all industries, many sectors are confronted with mounting operational challenges. The medical device industry, which is closely linked to health and well-being, faces particularly complex pressures in its daily operations. For this reason, enterprises must adopt scientific and effective working capital management practices. Through sound working capital management, firms can identify potential operational problems in a timely manner and implement targeted solutions, thereby laying a solid foundation for sustainable development.

The value chain serves as the cornerstone of efficient and standardized corporate operations. The internal value chain directly influences the efficiency and quality of various business units, while the industrial value chain affects the turnover speed of the entire supply and distribution system. Therefore, exploring working capital management from the value chain perspective is of great practical importance for medical device enterprises to improve operational efficiency and achieve long-term stable development.

Keywords: Value Chain, Working Capital Management, Medical Device. Industry

1 Introduction

Amidst fierce medical device industry competition and the drive for high-quality development, efficient working capital management is vital. Traditional isolated fund management is outdated, and value chain theory provides an integrated optimization framework. This paper analyzes Yuwell Medical's working capital from the value chain perspective, identifying external issues (excessive occupation of supplier funds, high customer dependence, slow collection) and internal problems (insufficient R&D, inventory/receivable backlogs) that reduce capital efficiency and disrupt supply chains. Corresponding internal-external coordinated optimization strategies are proposed, offering references for Yuwell and similar enterprises to enhance working capital management and core competitiveness.

2 Relevant Concepts of Working Capital Management from the Value Chain Perspective

2.1 The Concept of the Value Chain

The value chain was first introduced by Michael E. Porter in 1985. It refers to the full set of value-creating activities undertaken by an enterprise, ranging from raw material procurement, production and processing, and marketing to after-sales service¹. The value chain can be divided into two components: the internal value chain and the external value chain. The internal value chain mainly covers R&D, procurement, production, sales and other operational processes, whereas the external value chain includes interactions with suppliers, customers and other external partners².

2.2 The Concept of Value Chain-Based Working Capital Management

Working capital management refers to a series of activities for planning, organizing, coordinating, and controlling the financing, utilization, and allocation of an enterprise's working capital³. The theory of value chain-based working capital management integrates value chain management and working capital management. It holds that enterprises should analyze the occupation and turnover of working capital in each link from the perspective of the value chain, and optimize resource allocation across all segments to maximize value creation for the entire value chain⁴.

3 Issues in Working Capital Management of Yuwell Medical from the Value Chain Perspective

3.1 Issues in Working Capital Management of Yuwell Medical under the External Value Chain

Long-Term Occupation of Funds from Upstream Suppliers. Suppliers are critical to the value chain and production stability. Yuwell Medical's accounts payable period rose to 113.71 days in 2024, far above the industry average and Mindray. Over-reliance on occupying suppliers' funds may harm reputation and endanger long-term supply chain stability.

High Dependence on Downstream Customers and Worrisome Collection Efficiency. Downstream customers are the final link in corporate value creation. Firms acquire raw materials, conduct production, and sell products to customers to achieve value appreciation, making effective customer relationship management essential for efficient operations.

Yuwell Medical faces high customer concentration, with the top five customers accounting for nearly 20% of revenue. Its loose credit policies have prolonged the accounts receivable turnover period (2020–2024) above the industry average, weakening capital efficiency, increasing bad debt risks, and harming overall liquidity.

3.2 Issues in Working Capital Management of Yuwell Medical under the Internal Value Chain

Weak Investment in R&D Activities. For medical device firms, R&D is critical to long-term competitiveness and directly affects working capital efficiency. Stable R&D investment supports technological innovation, enhances product differentiation, and builds core barriers. Yuwell Medical's R&D investment is shown in Table 1.

Table 1. Composition of Working Capital in R&D of Yuwell Medical, 2020–2024

Item	2020	2021	2011	2023	2024
Operating income (100 million yuan)	67.26	68.94	71.02	79.72	75.66
Growth rate of operating income (%)	45.08%	2.51%	3.01%	12.25%	-5.09%
R&D investment (100 million yuan)	4.02	4.26	4.96	5.04	5.47
Growth rate of R&D investment (%)	70.81%	6.02%	16.62%	1.61%	8.39%
Ratio of R&D investment to operating income of Yuwell Medical (%)	5.97%	6.17%	6.99%	6.33%	7.23%

Table 1 shows that Yuwell Medical's R&D investment has increased but remains much lower than leading firms like Mindray. Its R&D growth fluctuated drastically, indicating unstable input. Insufficient and unstable R&D weakens innovation, product competitiveness and long-term market position, limiting the company's development potential.

Impaired Supplier Credit Relationships in the Procurement Link. Working capital in the procurement process mainly includes costs related to raw materials, parts, and other direct procurement expenses. Enterprises with strong bargaining power can obtain credit from suppliers through accounts payable, lower financing costs, and improve cash flow. The working capital condition of Yuwell Medical in the procurement link is presented in Table 2.

Table 2. Composition of Working Capital in the Procurement Link of Yuwell Medical, 2020–2024

Item	2020	2021	2011	2023	2024
Material inventory (100 million yuan)	2.67	3.90	6.70	4.76	4.90
Prepayments (100 million yuan)	0.58	0.42	0.82	0.42	0.42
Accounts payable (100 million yuan)	9.27	9.76	12.57	11.36	12.26
Notes payable (100 million yuan)	0.00	0.00	1.90	2.75	3.04
Working capital in procurement link (100 million yuan)	-6.01	-5.44	-6.95	-8.93	-9.98

As shown in Table 2, Yuwell Medical's accounts payable rose from 927 million yuan in 2020 to 1.530 billion yuan in 2024. Its negative working capital and long turn-over period reflect high reliance on occupying suppliers' funds. Although this shows strong bargaining power, long-term excessive occupation may damage supplier relations and bring supply, pricing and quality risks, harming overall supply chain stability.

Slow Capital Recovery in the Sales Link. The sales link connects enterprises with customers and achieves corporate value appreciation. Through procurement,

production, and sales, enterprises realize profits and capital appreciation, so improving capital recovery efficiency is essential. The internal structure of working capital in Yuwell Medical's sales link is shown in Table 3.

As shown in Table 3, Yuwell Medical's sales-oriented working capital remained high and positive from 2020 to 2024. Large inventories and accounts receivable took up considerable funds. High inventory raised storage and impairment risks, while slow collection lowered capital efficiency and increased bad-debt risks, hindering the company's healthy development.

Table 3. Composition of Working Capital in the Sales Link of Yuwell Medical, 2020–2024.

Item	2020	2021	2011	2023	2024
Inventory of finished goods (100 million yuan)	6.16	7.97	5.82	8.30	8.81
Accounts receivable (100 million yuan)	5.47	5.16	6.47	4.48	7.15
Advances from customers (100 million yuan)	0.00	0.00	0.00	0.00	0.00
Taxes payable (100 million yuan)	0.65	0.84	3.11	1.57	2.36
Working capital in sales link (100 million yuan)	10.97	12.28	9.18	11.21	13.61
Operating income (100 million yuan)	67.26	68.94	71.02	79.72	75.66
Working capital turnover days (days)	58.73	64.13	46.52	50.61	64.74

4 Analysis of the Causes of Working Capital Management Problems of Yuwell Medical from the Perspective of Value Chain

4.1 Analysis of Causes of Working Capital Management Problems Based on External Value Chain

Incomplete Upstream Supplier Management System. Yuwell Medical's upstream supplier management system is imperfect. The company faces rising supplier concentration and potential related-party transactions, heightening supply chain vulnerability. Excessive reliance on accounts payable to occupy suppliers' funds impairs long-term cooperative stability and security of supply.

Inadequate Downstream Customer Relationship Management. Yuwell Medical relies excessively on key customers and lacks systematic customer relationship management. Inconsistent sales and credit policies have resulted in slow receivable turnover, elevated bad debt risks, and impaired overall working capital efficiency.

4.2 Analysis of Causes of Working Capital Management Problems Based on Internal Value Chain

Unscientific R&D Project Management Mechanism. R&D investment is vital for corporate growth and competitiveness. Yet many managers focus on short-term profits while neglecting long-term R&D value. The absence of a systematic R&D management system leaves Yuwell Medical's R&D input far below industry benchmarks. Thus, the

company must build a scientific R&D mechanism to enhance product competitiveness and achieve sustainable development.

Lack of Working Capital Management Concepts. Yuwell Medical's weak working capital management results from outdated and unsystematic management concepts, leading to poor fund planning, inefficient decision-making, and damaged cooperation with upstream and downstream partners⁵. This has significantly reduced its competitiveness. The company must adopt advanced management concepts to enhance capital efficiency and ensure stable development⁶.

Weak Innovation in Sales Channels and Marketing Models. Yuwell Medical has significant weaknesses under intense competition and diversified demand. Over-reliance on online channels and weak offline and hospital presence limit growth. Most products are mid-to-low-end with insufficient differentiation, and traditional marketing weakens brand influence. These issues reduce sales efficiency and harm working capital management.

5 Suggestions for Improving Working Capital Management of Yuwell Medical from the Perspective of Value Chain

5.1 Suggestions for Improving Working Capital Management of Yuwell Medical from the Perspective of External Value Chain

Optimize Collaborative Efficiency of Upstream Supply Chain. Based on the value chain analysis, Yuwell Medical faces risks from high accounts payable, long turnover periods, and related-party transactions. The company should diversify suppliers, standardize pricing, improve disclosure, and implement a refined accounts payable system to balance capital efficiency and supply chain stability.

Strengthen Cooperation with Downstream Distributors. Yuwell Medical should build strategic ecological cooperation with downstream distributors, enhance data sharing and interest binding, and provide training and marketing support. Joint service-oriented strategies can boost market penetration. A refined credit system should be adopted to balance sales growth and payment risks.

5.2 Suggestions for Improving Working Capital Management Based on Internal Value Chain

Improve R&D Project Management Mechanism. The medical device market is rapidly growing high-end, intelligent and service-oriented. Yuwell Medical must increase stable R&D investment. It should establish a systematic R&D fund mechanism, dynamic budget control, and an investment-output evaluation system to improve efficiency and strengthen long-term competitiveness.

Establish a Working Capital Management Concept of Business-Finance Integration. To improve its outdated working capital management, Yuwell Medical should establish a business-finance integration system. It needs to strengthen collaboration,

optimize credit and settlement terms, build a dynamic cash flow warning mechanism, and adopt digital tools to enhance capital efficiency.

Expand Diversified Sales Channels. Yuwell Medical should strengthen digital and private domain operations, expand brand direct sales and experience channels, and deepen cooperation with elderly care, community and cross-industry partners. It can also adopt localized agencies to expand overseas market coverage.

6 Conclusion

From the value chain perspective, this paper analyzes Yuwell Medical's working capital management and identifies problems in R&D, procurement, sales and supply chain collaboration. It proposes targeted strategies including partner management, R&D funding, business-finance integration and channel diversification. The conclusions provide references for Yuwell and similar medical device firms to improve capital efficiency and competitiveness.

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