



Efficiency, Power, and Risk in the Supply Chain: An Analysis of Working Capital Management of Haday Co. Ltd.

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Abstract. This study evaluates the working capital management efficiency of Foshan Haday Flavouring & Food Co., Ltd., from a supply chain perspective for the period 2019-2023. Taking Haday as a case study and using financial ratio analysis, it is found that the company's market dominance results in a consistently negative Cash Conversion Cycle and high economic efficiency. This is accomplished by extending the terms of payment made to suppliers (leading to a high Days Payables Outstanding or DPO) and enforcing cash-on-delivery with distributors (leading to a low Days Sales Outstanding or DSO). However, this power-centric model conceals significant risks, such as excessive inventory in the distribution channel. Such excessive inventory distorts market demand signals and shifts financial pressure to the company's downstream distributors. For sustainable development, this study suggests adopting supply chain finance tools (e.g., reverse factoring) and establishing a unified digital platform to align the interests of all stakeholders and enhance the resilience of the value chain.

Keywords: Supply Chain Management, Working Capital Management, Cash Conversion Cycle, Efficiency Analysis, Systemic Risk.

1 Introduction

Working Capital Management is an integral part of corporate financial management, and its efficiency affects the liquidity, profitability, and solvency of a company [1]. WCM is particularly crucial in the Fast-Moving Consumer Goods industry, characterized by short production and delivery cycles and narrow profit margins. Moreover, globalization and intensifying market competition have significantly transformed the competitive landscape from firm-level competition to supply chain-level competition. Supply Chain Management is concerned with improving the overall operational efficiency and responsiveness of the entire value chain by effectively integrating the flows of information, materials, and funds. Conventional WCM research has merely focused on internal analysis based on a firm's financial statements, treating the firm as a closed system. Nevertheless, in the modern business

world, the working capital situation of a firm has close ties with the operations of its upstream suppliers and downstream customers [2].

This paper empirically analyzes the impact of supply chain power dynamics on the financial performance of Foshan Haday Flavouring & Food Co., Ltd, a leading firm in China's condiment industry. Given Haday's leading position in both its supply chain and market share, it provides a compelling context to study its WCM [3]. However, while WCM indicators in financial reports are strong, industry reports show problems such as high channel inventory and slowing growth, so a disparity exists between internal financial metrics and the overall health of the supply chain. This reveals a research gap regarding the influence of a leading firm's supply chain power model on its working capital management efficiency, as well as the systemic risks arising from a power-dominant supply chain management approach [4, 5].

By embedding WCM in the context of supply chain, one central question of interest in this research will be: (1) How does Haday's supply chain structure influence its WCM efficiency? (2) What underlying risks are associated with its exceptional financial performance? (3) What strategies can optimize the current situation to support the sustainable development of Haday and its supply chain? This study adds value to the literature as it goes beyond the macro-level link (between SCM and WCM) to provide a detailed micro-level analysis of the complex relationship of market power, financial efficiency, and the stability of the supply chain. Managers, investors, and scholars interested in more fully understanding corporate performance in a networked economy would benefit greatly from the results found in this study.

2 Theoretical Framework

This research is based on the integrated theory of Supply Chain Management and Working Capital Management, which is also an aspect of Supply Chain Finance [2]. The fundamental premise of this theory is that corporate value creation depends not merely on the efficient flow of products and information but on the effective coordination and financial optimization of information, material, and capital flows across the supply chain. Collaborative management across the chain can lower the cost of capital occupied throughout it and reduce financing constraints due to information asymmetry, thereby enhancing collective competitiveness. In addition, the "time-to-build" theory of supply chains plays an important role in analyzing this relationship, which posits that the longer and more complex a supply chain is, the more working capital is needed to sustain its operations [6]. This view brings out the importance of time in the cost of working capital and provides a basis for analyzing the capital invested in Haday's long production-distribution chain, from raw material purchase to finished product sale.

The primary metric for evaluating WCM efficiency is the Cash Conversion Cycle, a widely accepted indicator in both academia and industry [7]. The CCC is calculated as follows:

$$CCC = DIO + DSO - DPO \quad (1)$$

where Days Inventory Outstanding, Days Sales Outstanding, and Days Payables Outstanding represent the inventory conversion period, receivables collection period, and payables deferral period, respectively.

The CCC reflects the duration between cash outlay for raw material acquisition and the collection of cash related to product sales. A short or even negative CCC is generally perceived as a characteristic of effective WCM. The three components that make up the CCC are connected to the core segments of the supply chain: DPO is associated with upstream purchasing, DIO is connected with midstream production and inventory, and DSO refers to downstream sales. As a result, when the CCC is deconstructed, analysts can systematically analyze working capital efficiency across each tier of the supply chain.

3 Analysis of Haday's Supply Chain and Working Capital Structure

3.1 Company and Supply Chain Overview

Foshan Haday Flavouring & Food Co., Ltd. is China's top condiment company, with a full line of products ranging from soy sauce and oyster sauce to culinary sauces and vinegars. Its flagship products have consistently held the top market share in the nation for many years [3]. As a publicly listed company on the Shanghai Stock Exchange, Haday has made its presence felt in the market with strong brand influence, a sound distribution network, and large-scale production capabilities. The company's business model is typical of the FMCG sector, characterized by high purchase frequency, low unit prices, and a broad consumer base, for which a highly efficient and cost-effective supply chain is crucial.

The supply chain of Haday is divided into three main sections: upstream purchasing, industrial production, and downstream sales. Its business model is a mix of modern industrial production and old, power-driven channel operations. In the upstream procurement segment, Haday focuses on bulk agricultural products and leverages its large-scale procurement to secure significant bargaining power with suppliers. This centralization and large-scale procurement model, which includes strategic partnerships and the use of financial instruments to hedge against price fluctuations, is essential to its cost leader approach and its ability to push working capital pressure back upstream [8]. The midstream production segment is Haday's most capital-intensive area, characterized by high levels of automation and digitalization. The company operates under the "make-to-stock + make-to-order" business model to accommodate scale and demand [3]. At the downstream, Haday's distribution network is its competitive edge, as it is the hub of 6,707 direct distributors by 2023 [9]. Haday adopts the more rigid "cash-on-delivery" or "direct payment" method, leading to reduced operating accounts receivable, but driving up inventory, and exerting financial pressure on its downstream counterparts.

3.2 Empirical Analysis of Working Capital Management Efficiency

To quantitatively assess Haday's WCM efficiency, this study analyzes its financial data from 2019 to 2023. The results are presented in Table 1. The analysis of the data demonstrates a variety of significant trends. Firstly, the DSO for Haday remained immensely low at consistently less than 3 days as a result of the company's strictly cash-based sales policy. In terms of DPO, however, Haday's DPO exhibited a dramatic and continuous upward trend, increasing from 110.2 days in 2019 to an astonishing 145.5 days in 2023, which indicates that the company is continuing to increase its ability to delay its payments to suppliers, financing inventory costs through its suppliers at zero cost. However, Haday's DIO metric indicates a failure in managing inventory, which deteriorated from 85.1 days in 2019 to 115.3 days in 2022 before recovering slightly. Overall, Haday's CCC remained negative throughout the study period, reaching -31.1 days in 2023. In summary, Haday collects cash from customers approximately one month before it needs to pay its suppliers.

Table 1. Haday's working capital management efficiency indicators.

Year	DSO	DIO	DPO	CCC
2019	2.5	85.1	110.2	-22.6
2020	2.1	92.5	118.9	-24.3
2021	2.3	105.7	125.4	-17.4
2022	2.0	115.3	130.1	-12.8
2023	1.8	112.6	145.5	-31.1

Note: The number in this table stands for days.

As shown in Table 2, a comparative analysis with major competitors and the industry average for 2023 further highlights Haday's unique position [10]. It is evident from the comparison that Haday's negative CCC is a deviation from the industry norm. Haday's relatively strong performance is not necessarily due to superior operations—its DIO shows lower efficiency than Qianhe Condiment's DIO. Instead, Haday's excessive and asymmetric leverage over upstream and downstream partners explains why its DPO is nearly twice its competitors and its DSO is only a fraction of the industry average. Ultimately, Haday's financial efficiency is a direct outcome of its market leadership's exploitation to dictate terms in its supply chain.

Table 2. Comparative WCM efficiency in the condiment industry.

Company/Industry	DSO	DIO	DPO	CCC
Haday	1.8	112.6	145.5	-31.1
Qianhe Condiment	10.5	88.9	75.3	24.1
Jiangsu Hengshun	25.1	180.5	90.7	114.9
Industry Average	15.7	125.4	85.1	56.0

Note: The number in this table stands for days.

4 Discussion: Systemic Risks and Structural Issues

Firstly, the upstream supplier strain and inherent risks. The enduring extension of Haday's DPO represents an extraordinary challenge for its suppliers, and especially for smaller farmers and agricultural producers, who often have to navigate supplier relationships with limited access to capital. This supplier relationship, centered on power rather than partnership, can lead to multiple negative consequences, including reduced supplier commitment and diminished incentives for supplier innovation, and the risk of supply disruption if a major supplier runs into a liquidity crisis, which can create issues for Haday's entire supply chain. In addition, suppliers facing financial pressure are more likely to compromise quality and/or pass-through costs, both of which may impact Haday's own product and cost structure. This approach creates a tenuous ecosystem upstream that is vulnerable to shocks.

Secondly, downstream channel inventory congestion and the bullwhip effect. The most crucial issue is the near-zero DSO: an abnormally high level of inventory congestion in downstream channels of distribution. Haday records revenue upon shipment to distributors—not at the end user level of the sale. The “payment-in-advance” policy essentially enables Haday to move its inventory from its balance sheet to the inventories of the distributors, essentially creating a large amount of channel inventory [4, 11]. As stated, there are additional, far more forceful implications of this reality. First and foremost, there is a significant financial burden placed on the distributors, further pinching their margin and creating channel instability. Second, the company does not have visibility into the true end-consumer demand, since company sales figures are based on sell-in from the distributor channel, not sell-through to the end-user. This inaccurate demand perception leads to exponentially increased demand volatility, which in turn impacts other supply chain participants, resulting in significant fluctuations in production planning and suboptimal production decisions. Haday's sales pressure during 2022-2023 was partially attributed to the need to destock the overly congested channel, which disrupted normal sales momentum and delayed new product launches [5].

Thirdly, lack of end-to-end supply chain integration and visibility. Notwithstanding its substantial investments in production automation, Haday's supply chain suffers from an absence of end-to-end digital integration and visibility. Central to the difficulty is a lack of a clear line of sight to the real-time point-of-sale data from the retailers selling Haday's products. Without this critical information, demand forecasting relies solely on lagging indicators of market demand, such as historical shipment data and distributor orders. The current WCM model operates as a zero-sum game, where Haday optimizes its financial position by pushing costs and risks external to its operations. The lack of collaborative elements, such as SCF to support suppliers or vendor-managed inventory systems to help distributors manage inventories, leaves the Haday supply chain dimensionally brittle, despite impressive financial metrics in the core firm.

5 Recommendations for a Collaborative and Sustainable Supply Chain

To address the identified structural issues, Haday must evolve its WCM philosophy from one centered on internal optimization and power dynamics to one focused on creating a resilient, collaborative, and mutually beneficial supply chain ecosystem.

To begin with, it is crucial to cultivate strategic supplier partnerships in conjunction with supply chain finance. Haday should classify suppliers into tiers (e.g., core suppliers, general suppliers) and establish long-term strategic relationships with key partners, offering them more reasonable payment terms. To mitigate the financial strain from Haday's extended payment term, Haday should put effort into promoting reverse factoring as a solution. By partnering with financial institutions, suppliers can receive early payment on their approved invoices at a low financing cost based on Haday's superior credit rating, transforming a one-way pressure into a three-way, win-win financial solution that supports the overall financial health of the upstream supply chain.

The second strategy to address channel inventory congestion is to have a uniform apparatus for "one inventory". This will require Haday to proactively invest in a digital platform that enables real-time visibility and management of inventory levels across all channels (i.e., distributors, e-commerce warehouses, direct-to-retail). With such an inventory visibility and management platform, Haday can move to a shared inventory model where an order from any channel is fulfilled at the best stocking point (e.g., a distributor saying, "I'll fulfill that from my warehouse" when there is enough inventory to do so). This will vastly improve inventory turnover for the distributors, diminish their capital burden, and convert stale channel stock into an asset that is flexible and efficient.

Ultimately, developing a complete digital collaborative platform is essential to enable real data-driven decision-making. Haday needs to broaden its existing intelligent supply chain platform to connect the supply chain's various stakeholders, from suppliers through to the end retailer. The central aim of the platform is to allow seamless integration of the information, financial, and material flows in the supply chain. For example, the platform would enable the sharing of POS data in real time to facilitate accurate AI forecasting, integrate SCF services to facilitate settlement, and provide end-to-end tracking of the logistics flows. By establishing such an ecosystem, Haday will evolve from a "chain leader" that extracts value to a "chain enabler" that actively creates and facilitates value, thus obtaining a more sustainable, resilient, competitive advantage.

6 Conclusion

The present research has shown that Foshan Haday Flavouring & Food Co. Ltd. demonstrates superior WCM efficiency, which is evidenced by a consistently negative CCC. However, this superior efficiency does not stem from a systematic operational improvement approach, but largely from the financial leverage of the company's

market power. It is more feasible for Haday to extract value via extended payment terms offered to suppliers and cash-based terms offered to distributors, which has improved Haday's financial position while actually harming its supply chain partners. This power-based value extraction model generates short-term financial gains but also introduces significant systemic risks, most notably excess channel inventory.

The inventory distorts market signals for supply chain partners and ultimately undermines Haday's own market growth potential. The significant challenge facing Haday is an ongoing and entrenched organizational habit of operating in a management philosophy focused on the individual firm, thus prioritizing the efficiency of the individual firm over the health of the collective supply chain group. Going forward, it will be critical for Haday to shift from a value-extraction and control-oriented approach to a collaborative and empowerment-oriented approach. However, this study has limitations: it focuses on Haday as a single case, which limits the generalizability of its conclusions.

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