

MINISTRY OF EDUCATION AND TRAINING

MINISTRY OF FINANCE

ACADEMY OF FINANCE

PHAM DUC VIET

**CASH FLOW MANAGEMENT IN LISTED RETAIL
ENTERPRISES IN VIETNAM**

Major: FINANCE – BANKING

Code: 9.34.02.01

**SUMMARY OF DOCTORAL DISSERTATION IN
ECONOMICS**

HANOI, 2026

The dissertation was completed at: ACADEMY OF FINANCE

Scientific supervisors:

1. Assoc. Prof. Dr. Nguyen Trong Than
2. Dr. Dang Phuong Mai

Reviewer 1:.....

.....

Reviewer 2:.....

.....

Reviewer 3:.....

.....

The dissertation will be defended before the Academy-level Dissertation Evaluation Council at the Academy of Finance at hour, on day month year 2006

INTRODUCTION

1. Rationale of the study

Cash flow is what sustains the existence of an enterprise and reflects its financial capacity directly, rather than profit recognised on an accrual basis. For listed retail enterprises, cash flow management (CFM) plays a central role because the industry is working-capital intensive, operates on thin margins and relies heavily on short-term borrowing. Retail is a growth-driving industry, and Decision No. 1163/QĐ-TTg sets the target of a contribution of 15.0 to 15.5% of GDP by 2030. CFM practice still shows many shortcomings. After-tax profits of retail enterprises declined as interest rates rose just as purchasing power weakened in 2023. Petroleum retailers are bound by mandatory reserve requirements, while Decree No. 95/2021/NĐ-CP shortened the price adjustment cycle from 15 days to 10 days. No enterprise has disclosed the use of a quantitative model to determine its cash reserve level. On this basis, the PhD candidate selected the topic “*Cash Flow Management in Listed Retail Enterprises in Vietnam*”.

2. Literature review

Theoretically, this line of research originates from Keynes’s (1936) theory of the three motives for holding money, was quantified through the optimal cash balance models of Baumol (1952), Miller and Orr (1966) and Stone (1972), and was extended to financing decisions through the pecking order theory of Myers (1984), the free cash flow theory of Jensen (1986) and the precautionary perspective of Acharya, Almeida and Campello (2007). Regarding the content framework of CFM, Vũ Văn Ninh et al. (2024) adopt a functional approach but do not arrange the components in an operating sequence, while Vũ Thùy Linh (2023) adopts a process approach with five components that is linear and separates the control of cash inflows from that of cash outflows. Regarding influencing factors, studies distinguish internal factors, including size, managerial capacity and access to finance, from external factors, including the macroeconomic environment, the legal framework, trade relationships and information technology.

Regarding the impact on financial performance, studies are reviewed along three channels. The channel of improving working capital efficiency has the most

consistent evidence, as Deloof (2003), Shin and Soenen (1998) and Laghari et al. (2023) all confirm a negative relationship between the cash conversion cycle (CCC) and profitability. The channel of optimising financing sources yields inconsistent results on the role of the payables period. The channel of balancing liquidity and opportunity cost shows that there is no single fixed level of cash reserves suitable for all enterprises (Nguyễn Hồng Thu, 2022). For the retail industry specifically, Ramadan and Morshed (2023) confirm that inventory management is the focus of CFM, Gaur et al. (2005) show that current assets account for about 68% of total assets, and Farris and Hutchison (2002) report a positive relationship between the payables period and profitability among enterprises with strong bargaining positions. In Vietnam, Huỳnh Thị Xuân Thủy et al. (2025) find that the CCC of retail enterprises is minus 25.9 days compared with 10.1 days for manufacturing enterprises in a multi-industry sample, while Đặng Thị Quỳnh Anh and Trần Thị Minh Huệ (2025) show that financial leverage has a negative effect on the profitability of listed retail enterprises.

3. Research gaps

Previous studies agree that the CCC is negatively related to profitability, that this relationship differs between manufacturing and retail enterprises, that financial leverage negatively affects the profitability of listed retail enterprises, and that the content framework of CFM has been established under both the functional and the process approaches.

The review reveals the following gaps. In terms of industry, no study has systematically analysed the effect of each CCC component on ROE specifically for listed retail enterprises in Vietnam. In terms of time, the evolution of the CCC has not been decomposed by the periods of e-commerce growth, the Covid-19 pandemic and high interest rates from 2022 to 2024. In terms of management content, the internal operating mechanism of CFM in retail enterprises remains under-researched. In terms of methodology, studies rarely combine qualitative analysis and have not tested the moderating role of free cash flow. In terms of technology, the impact of digital infrastructure on CFM has not been quantified. In terms of the

capital market, the relationship between the quality of reported cash flows and firm value has not been clarified.

The dissertation addresses four gaps relating to industry, time, management content and methodology, thereby providing specific evidence for listed retail enterprises on the effect of CCC components on ROE, identifying CCC dynamics by period, clarifying the operating mechanism of CFM and developing solutions differentiated across three industry groups. The gaps relating to technology and the capital market fall outside the scope due to limitations of publicly disclosed data.

4. Research objectives and tasks

The overall objective is to systematically assess the current state of CFM in listed retail enterprises in Vietnam, test the impact of CFM on financial performance, and propose solutions suited to the characteristics of the industry. The tasks of the dissertation include reviewing the literature to identify gaps, systematising the theoretical foundations, analysing data by cash flows from operating (CFO), investing (CFI) and financing (CFF) activities, building and testing the research models, discussing the results, and proposing solutions together with implementation conditions.

5. Research questions

The dissertation answers five questions, namely what role CFM plays in corporate financial management, what components CFM comprises, what the current state of CFM in listed retail enterprises was over the period 2017 to 2024 and how it differed across sub-periods, how the CCC and its components, namely days inventory outstanding (DIO), days sales outstanding (DSO) and days payable outstanding (DPO), affect ROE, and what system of solutions and conditions is needed under the five-component CFM framework, differentiated across three industry groups.

6. Research object and scope

The research object is CFM in listed retail enterprises in Vietnam. *Content scope*: the dissertation approaches CFM through five circularly related components, analyses cash flows by activity and by ownership structure, and tests the effect of the CCC and its components on ROE across three industry groups. *Spatial scope*: the sample

comprises 23 out of 30 listed retail enterprises on the Ho Chi Minh City Stock Exchange and the Hanoi Stock Exchange, divided into consumer goods and ICT retail, automobile and other products retail, and petroleum and energy retail. The results are not generalised to unlisted retail enterprises. *Time scope*: secondary data cover the period 2017 to 2024, and expert opinion data were collected in 2025.

7. Research methodology

The dissertation adopts an explanatory sequential mixed-methods design, combining synthesis, statistical comparison, induction, interpretation and systematisation. The qualitative analysis draws on two data sources. The first source is the annual reports and notes to the financial statements of the sampled enterprises over the period 2017 to 2024, systematised according to the five CFM components. The second source is the opinions of two auditing experts, each with more than 20 years of experience, who responded in writing to a questionnaire in April 2025 on the basis of their experience and review of published reports, used to cross-validate and interpret the quantitative findings. The quantitative analysis uses panel data regression with 184 observations, the Hausman test to choose between the fixed effects model (FEM) and the random effects model (REM), firm-clustered robust standard errors and the Wu Hausman test for endogeneity. The dependent variable is ROE, the independent variables are the CCC together with DIO, DSO and DPO, the moderating variable is the ratio of free cash flow to sales (FCF/Sales), and the control variables are firm size (SIZE) and financial leverage (LEV).

8. New contributions of the dissertation

Theoretically, the dissertation makes three contributions. First, it establishes a CFM content framework for listed retail enterprises comprising five circularly related components, building on the process orientation of previous studies, merging the control of cash inflows and outflows into a single component reflected through the cash conversion cycle, and adding a feedback mechanism from the handling of surpluses and deficits back to the establishment of the receipt and payment mechanism, with each component linked to underlying theories as direct tools. Second, it establishes a two-level analytical framework in which the structure of cash

flows from operating, investing and financing activities reflects the strategic level, while the cash conversion cycle and its components reflect the operational level. Third, it provides evidence that free cash flow plays neither a mediating nor a moderating role in the relationship between working capital management and profitability, confirming that the effects of managing inventory, receivables and payables are direct. The positive relationship between the payables period and profitability indicates that, for retail enterprises with strong bargaining power, extending the payables period reflects proactive working capital management, supporting the view of Farris and Hutchison (2002) rather than the traditional view of Deloof (2003).

Practically, the dissertation analyses the current state of CFM in 23 listed retail enterprises across three industry groups, decomposes the evolution of the cash conversion cycle across three economic periods, and identifies inventory days as the component with the strongest negative effect and financial leverage as a persistent burden on profitability. On this basis, it proposes five solutions under the five CFM components differentiated across three industry groups, two foundational solutions on managerial capacity and technology, and conditions on the part of the State and enterprises.

9. Structure of the dissertation

Apart from the introduction, conclusion, references and appendices, the dissertation consists of three chapters. Chapter 1 presents the theoretical foundations of CFM in enterprises. Chapter 2 analyses the current state of CFM in listed retail enterprises in Vietnam. Chapter 3 proposes solutions to strengthen CFM in listed retail enterprises in Vietnam.

CHAPTER 1

THEORETICAL FOUNDATIONS OF CASH FLOW MANAGEMENT IN ENTERPRISES

1.1. Theory of cash flow

Cash flow is the movement of cash receipts and payments arising from all activities of an enterprise during a period, reflecting its ability to convert business results into actual cash. By activity, cash flow from operating activities (CFO) reflects the core cash-generating capacity and is directly affected by inventory, receivables and payables. Cash flow from investing activities (CFI) reflects long-term capital allocation decisions. Cash flow from financing activities (CFF) reflects changes in equity and borrowings and depends on the gap between CFO and CFI. By ownership structure, free cash flow to the firm (FCFF) belongs to both creditors and owners, while free cash flow to equity (FCFE) is the residual available to shareholders.

In CFM, CFO plays a central role in three respects. CFO is the main internal source of financing, and when positive and stable it allows the enterprise to self-finance its working capital and part of its investment needs. CFO provides signals for adjusting trade credit policy and inventory structure. CFO is the basis for cash flow planning and for determining a reasonable reserve level. A persistently negative CFI during a growth phase is not necessarily negative in meaning, but it requires the enterprise to ensure a sufficiently strong CFO, because when CFI exceeds CFO, free cash flow turns negative and the enterprise must rely on external financing through CFF. CFF therefore reflects risk appetite, leverage strategy and the degree of matching between the maturity of funding and the maturity of its use.

Cash flows of retail enterprises are closely tied to working capital, with inventory rather than receivables being the focus of management, supplier credit being an important source of financing, cash flows fluctuating seasonally and free cash flow possibly being low during expansion phases. Depending on the value and turnover speed of goods, three typical cash flow cycles are formed. Essential goods such as

petroleum have short cycles but thin margins and are subject to price regulation. Consumer goods and ICT products can take advantage of trade credit but face obsolescence risk. High-value goods such as automobiles have long cycles and depend on bank financing. This is the basis on which the dissertation divides the sample into three industry groups.

1.2. Cash flow management

1.2.1. Concept and objectives

CFM is the process of planning, controlling and coordinating the cash inflows and outflows of an enterprise in order to ensure short-term solvency, maintain a cash balance that trades off opportunity cost against the risk of liquidity shortfall, and optimise the allocation of cash flows to create sustainable value. These three objectives correspond to the transaction, precautionary and speculative motives of Keynes (1936) and are reinforced by Myers's (1984) theory of prioritising internal funds and Jensen's (1986) theory of disciplining excess cash flow.

CFM thinking developed in three steps. Baumol (1952) treats cash as a form of inventory and determines the optimal withdrawal size under even cash flows. Miller and Orr (1966) treat net cash flow as a random process, with the enterprise intervening only when the balance reaches the upper or lower limit. Stone (1972) adds forecast information to adjust the balance before it reaches the limits. Acharya, Almeida and Campello (2007) extend the analysis to a precautionary perspective, viewing cash as a shield that enables enterprises to sustain investment when financially constrained. These theories serve as direct tools for each CFM component presented below.

1.2.2. Components of cash flow management

Building on both the functional and the process approaches, the dissertation establishes a CFM framework consisting of five circularly related components.

Establishing the receipt and payment mechanism means setting up an internal institutional framework that includes principles, limits, an authorisation matrix by content and transaction value, and an approval procedure for each cash flow. The

development process starts from the enterprise's strategy and business model, reviews legal regulations on enterprises, accounting and taxation, sets up an authorisation matrix with approval levels rising with transaction value, standardises the payment procedure with specific documents and processing deadlines, consults the relevant departments and then issues the mechanism under the authority of the Board of Directors or the General Director. The mechanism is reviewed periodically when laws, organisation or risks change. The core principle is to shorten collection time and control the timing of payments without undermining financial reputation (Soenen, 1973).

Determining the optimal cash reserve level means finding the balance between holding costs and shortage costs. The Baumol model assumes even cash flows, the Miller and Orr model recognises random fluctuations with a control band of upper and lower limits, and the Stone model adds a forecasting element. Holding too little cash forces the enterprise to borrow urgently at high cost, while holding too much cash creates opportunity costs and agency problems, as warned by Jensen (1986). In practice, enterprises combine three groups of bases. The quantitative group uses the above models to estimate the target cash level and compares it with actual balances over a sufficiently long period. The internal management group considers the cash flow plan, credit limits, seasonality and the DIO, DSO and DPO indicators. The external reference group compares the cash policy with peers in the same industry operating under similar conditions. The three groups are combined in a recurring cycle instead of seeking a single fixed value.

Cash flow planning converts the principles and reserve level into a receipt and payment plan across three time horizons. The short-term horizon serves immediate liquidity, the medium-term horizon of three to twelve months is linked to the business plan, and the long-term horizon serves capital allocation decisions. The process consists of three steps. Step one determines the scope and forecast period in line with the business cycle. Step two collects input data such as the opening balance, revenue plan, receivables collection schedule, supplier payment schedule, wages, taxes, investment plan and debt repayment schedule, and classifies them by degree of

certainty. Step three forecasts cash inflows, outflows and expected balances using the direct or indirect method. The target reserve level becomes the benchmark for identifying in advance the points of surplus or deficit (Reider and Heyler, 2003).

Implementation and control translates the plan into tasks for each department, monitors the cash balance daily or weekly, and reconciles accounting documents with bank statements and internal cash flow reports. Control of cash inflows focuses on credit policy and receivables ageing, control of cash outflows focuses on reasonable use of payment terms, and the overall result is reflected in the CCC. Gill, Biger and Mathur (2010) show that maintaining receivables at an optimal level, instead of minimising them, allows enterprises to both expand revenue and stabilise cash flows. On the payment side, extending payment terms requires internal thresholds that distinguish strategic suppliers, who should be paid on time, from ordinary suppliers, in order to avoid losing discounts and disrupting supply.

Evaluating and handling surpluses and deficits means comparing the actual balance with the target reserve level. In a surplus, the enterprise prioritises capital preservation, then liquidity and only then profitability. In a deficit, the enterprise prioritises low-cost internal solutions before turning to external sources, in line with the pecking order theory of Myers (1984). Options for handling surpluses include term deposits, money market instruments, early debt repayment or allocation to value-creating projects. Options for handling deficits range from accelerating collections, adjusting payment schedules and transferring funds internally, before resorting to credit lines and short-term borrowing.

The distinctive feature of the framework is its circularity. The results of handling surpluses and deficits in one period become feedback data for adjusting the receipt and payment mechanism in the next period, allowing the CFM system to be continuously recalibrated in a volatile retail environment.

1.2.3. Evaluation indicators

The central indicator at the operational level is $CCC = DIO + DSO - DPO$. A short CCC indicates that the enterprise sells quickly, collects quickly or is able to

extend its payment period, although enterprises should determine an appropriate level rather than minimise it absolutely. The ratio of free cash flow to sales serves as a bridge between the operational and strategic levels. The current ratio and quick ratio are static and therefore need to be combined with the CCC.

1.2.4. Influencing factors and mechanisms of impact on financial performance

Internal factors comprise three factors. Large size brings advantages in bargaining and fundraising but increases the complexity of cash flow coordination and the risk of over-investment, while small enterprises decide quickly but lack control systems (Aren and Sibindi, 2014). Managerial capacity is reflected in the forecasting ability of the finance function and the degree of coordination among departments. Enterprises with restricted access to external capital depend more on internal cash flows and must manage more prudently (Almeida, Campello and Weisbach, 2004). External factors comprise the macroeconomic environment and legal framework, which determine the stability of cash flows, trade relationships with customers and suppliers, which determine the timing of cash inflows and outflows, and the level of information technology adoption, which determines processing speed and forecast accuracy.

The dissertation uses ROE as the measure of financial performance because, under the DuPont model, ROE combines profit margin, asset turnover and financial leverage. CFM affects ROE through three mechanisms. The mechanism of improving working capital efficiency releases capital tied up in inventory and receivables, allowing the same amount of capital to turn over more times, as consistently confirmed by Shin and Soenen (1998) and García-Teruel and Martínez-Solano (2007). The mechanism of optimising financing sources reduces dependence on borrowing thanks to internal cash flows and trade credit, although in distressed enterprises a long payables period may reflect liquidity pressure rather than a proactive decision. The mechanism of balancing liquidity and opportunity cost ensures that decisions remain within acceptable risk limits, consistent with the inverted U-shaped relationship between working capital and financial performance found by Baños-Caballero et al. (2014). For retail enterprises, these three

mechanisms are particularly pronounced because inventory accounts for a large share of assets and the business cycle runs at high frequency.

1.3. International experience and lessons for Vietnamese retail enterprises

Costco operates a warehouse retail model with a selective product range, combining immediate cash collection, fast inventory turnover and long payment terms with suppliers, bringing its CCC to a low or negative level, so that supplier credit becomes its main source of working capital financing. AEON prepares cash flow plans by integrating sales, purchasing, inventory and investment information from each unit, monitors cash flows in near real time through a centralised management platform and maintains a prudent liquidity policy. Amazon prioritises generating stable CFO rather than maximising short-term profit, using cash flows to reinvest in logistics, technology infrastructure and new businesses and reducing dependence on external capital. From these cases, the dissertation draws five lessons linked to the five CFM components and applied selectively by industry group. On the receipt and payment mechanism, Costco's lesson of extending payment terms suits the consumer group best, the automobile group should prioritise shortening inventory holding time, and the petroleum group has little bargaining room because prices are regulated. On the reserve level, it should be set on the basis of payment needs and expansion plans rather than experience, higher in the automobile group and with a buffer for price volatility in the petroleum group. On cash flow planning, it should be linked to the business plan and updated over short periods as at AEON. On control, finance should coordinate with sales, purchasing and logistics and regularly monitor the CCC and its components. On handling surpluses, Amazon's approach should be applied cautiously, prioritising investment that directly serves retail operations after the necessary reserve level has been secured.

CHAPTER 2

CURRENT STATE OF CASH FLOW MANAGEMENT IN LISTED RETAIL ENTERPRISES IN VIETNAM

2.1. Overview of the sample and financial position

Out of 30 listed retail enterprises, the PhD candidate excluded 7 enterprises that did not meet the data continuity criterion, leaving 23 enterprises with 184 observations. The consumer goods and ICT group comprises BTT, FHS, FRT, MWG, PNC and SAS. The automobile and other products group comprises CTF, DVC, HAX, HMG, HUT, PNG, PNJ and SVC. The petroleum and energy group comprises BMF, CMV, COM, GCB, HFC, PEQ, PTH, TLP and TMC. Total assets of the sample increased by 154%, from VND 65,489 billion in 2017 to VND 166,385 billion in 2024, and the share of current assets rose from 65.8% to 77.7%. ROE bottomed at 3.83% in 2020 and recovered to 5.42% in 2024.

2.2. Current state of cash flows

Industry-wide CFO fluctuated sharply, turning negative by more than VND 4.7 trillion in 2019 due to rising inventory, increasing to more than VND 16.3 trillion in 2020 and reaching more than VND 12.3 trillion in 2024. CFI was negative in most years because of network expansion, while CFF was strongly positive precisely in the years when CFO weakened, showing that borrowing played a compensating role. The petroleum group had the most unstable CFO, at minus VND 3,234 billion in 2023, while the automobile group's CFO fluctuated with the consumption cycle. The consumer group recorded negative CFO in 2018 and 2019 as chain expansion outpaced cash generation. FCFE peaked at about VND 22.9 trillion in 2022 but turned negative in 2019, 2021, 2023 and 2024, indicating that free cash flow is driven more by working capital and investment needs than by profit.

2.3. Current state of cash flow management

Regarding the receipt and payment mechanism, enterprises have developed industry-specific regulations. The consumer group tiers payment terms by customer segment, the automobile group ties debt collection responsibility to each contract and

to borrowing limits approved by the Board of Directors, and the petroleum group uses technical norms as the regulatory backbone. FRT links investment spending authority to its Long Châu chain expansion strategy, HUT requires full debt recovery at projects, TMC has shifted most transactions to cashless payment, and CMV sets a roadmap for reducing the share of deferred-payment sales. Nevertheless, the mechanism is not yet tight enough to prevent capital from being tied up in receivables.

Regarding the cash reserve level, no enterprise applies a quantitative model or industry benchmark, and reserve policy relies entirely on experience. The consumer group separates cash for immediate payments from short-term deposits and links the reserve level to product launch cycles. The automobile group prioritises repaying borrowings combined with periodically renewed credit lines. The petroleum group maintains the lowest cash balance but in a passive manner, as COM's cash balance fell from VND 169 billion to VND 10 billion within a single year.

Regarding cash flow planning, only MWG and FRT operate all three forecasting horizons, while most enterprises prepare only short-term plans under a single scenario. Misjudging consumption trends at the end of 2022 left many enterprises with high inventories in 2023.

Regarding implementation and control, the industry average CCC moved through three periods. From 2017 to 2019, the consumer group's DSO declined thanks to e-commerce, but DIO barely improved. From 2020 to 2022, industry-wide DIO rose from 48.44 days to 65.83 days due to supply chain disruptions. From 2022 to 2024, DSO fell to 26.52 days but DIO remained around 52 days. The CCC across the sample ranged from minus 32.74 days at FHS to 455.18 days at HUT, with a different dominant component in each enterprise. FHS is driven by the payables period, HUT and GCB by the receivables period, and PNJ and TLP by the inventory period.

Regarding the handling of surpluses and deficits, enterprises have used all common approaches, such as paying dividends, regulating internal funds, reinvesting, unsecured short-term borrowing and asset restructuring, but these practices remain

fragmented and lack a clear order of priority. Only PNJ and HUT apply the three lines of defence model, and at least 3 of the 23 enterprises use an enterprise resource planning system to monitor cash flows.

Cross-validation through expert opinions. The two experts confirm that enterprises do not use quantitative models, that cash flow plans lack stress testing, that inventory is financed mainly by short-term borrowing, and that enterprises with strong positions maintain payables periods longer than receivables periods. The difference is that the experts assess compliance with internal regulations, while the dissertation assesses the impact on financial performance.

2.4. Testing the impact of cash flow management on financial performance

The dissertation estimates four panel data models using the FEM approach with firm-clustered robust standard errors.

$$\text{Model 1. } ROE_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + u_i + \varepsilon_{it}$$

$$\text{Model 2. } ROE_{it} = \alpha_0 + \alpha_1 DIO_{it} + \alpha_2 DSO_{it} + \alpha_3 DPO_{it} + \alpha_4 SIZE_{it} + \alpha_5 LEV_{it} + u_i + \varepsilon_{it}$$

$$\text{Model 3. } FCF_Sales_{it} = \gamma_0 + \gamma_1 DIO_{it} + \gamma_2 DSO_{it} + \gamma_3 DPO_{it} + \gamma_4 SIZE_{it} + u_i + \varepsilon_{it}$$

$$\text{Model 4. } ROE_{it} = \delta_0 + \delta_1 CCC_{it} + \delta_2 FCF_Sales_{it} + \delta_3 (CCC \times FCF_Sales)_{it} + \delta_4 SIZE_{it} + \delta_5 LEV_{it} + u_i + \varepsilon_{it}$$

The Hausman test yields a p-value below 0.05, and the Wu Hausman test yields a p-value of 0.499, detecting no endogeneity. The results of Model 2 are presented in Table 2.1.

Table 2.1. FEM regression results of the effect of CCC components on ROE

Variable	Coefficient	Std. error	t-value	P-value
DIO	-0.00112***	0.00027	-4.18	0.000
DSO	-0.00037***	0.00013	-2.79	0.006
DPO	0.00055**	0.00026	2.11	0.036
SIZE	-0.02092	0.01278	-1.64	0.104
LEV	-0.01287***	0.00332	-3.87	0.000
Constant	0.70749**	0.35060	2.02	0.045
<i>Observations 184, firms 23, R² within 0.2487. *** $p < 0.01$, ** $p < 0.05$.</i>				

Source: Author's estimation using Stata

Table 2.2. Summary of hypothesis testing results

Hypothesis	Relationship	Expected	Result	Conclusion
H1	CCC → ROE	(−)	-0.00046*	Supported
H2a	DIO → ROE	(−)	-0.00112***	Supported
H2b	DSO → ROE	(−)	-0.00037***	Supported
H2c	DPO → ROE	(+)	0.00055**	Supported
H3a	LEV → ROE	(−)	-0.01287***	Supported
H3b, H3c	SIZE, FCF_Sales → ROE	(+)	Not significant	Rejected
H4	DIO, DSO, DPO → FCF_Sales	(+/-)	Not significant	Rejected
H5	FCF_Sales moderates CCC → ROE	(+)	Not significant	Rejected

Source: Compiled by the author

DIO has the strongest negative effect on ROE, and DSO is also negative, consistent with Deloof (2003) and Huỳnh Thị Xuân Thủy et al. (2025). DPO is positively related to ROE, differing from Deloof (2003) but consistent with Farris and Hutchison (2002), reflecting the bargaining power of large retail enterprises. LEV is

consistently negative across all models. Model 3 has a Prob > F of 0.7925 and the interaction term in Model 4 is not significant, owing to extreme values of FCF/Sales and to cash flows being immediately reinvested in expansion. This result confirms that working capital management affects ROE directly through asset turnover and operating costs rather than through the free cash flow channel. SIZE is not statistically significant, suggesting that scale advantages have not translated into financial performance amid intense competition that forces large enterprises to spend more on premises and distribution systems.

2.5. Limitations and causes

The dissertation identifies four limitations, namely working capital tied up in inventory and receivables, dependence on borrowing to finance working capital, uneven capacity to manage the CCC across groups, and a mismatch between accounting profit and actual cash flow. Tied-up capital is evident in high-value inventory at CTF and HAX, rapidly growing inventory during expansion at MWG and FRT, and slow debt collection at GCB and HMG. Dependence on borrowing is most evident in the automobile group, such as HAX and SVC, and in the petroleum group, such as TLP and COM. The benefits of long payables periods accrue mainly to enterprises with strong positions, such as MWG and PNJ.

Objective causes include the capital-intensive nature of the industry, mandatory reserve requirements in the petroleum group, manufacturers' distribution policies in the automobile group and the interest rate shock of 2022 to 2023. Subjective causes include limited financial management capacity and digital transformation, extensive growth strategies such as FRT with the Long Châu chain and HUT with its automobile ecosystem, loose trade credit policies at wholesale-oriented enterprises such as GCB, DVC and HMG, and weak cash flow forecasting leading to mis-sized purchases at the end of 2022.

Methodologically, the small sample size reduces statistical power, annual data do not capture intra-year fluctuations, and the opinions of two experts serve only for cross-validation and are not intended to generalise to the whole sample.

CHAPTER 3

SOLUTIONS TO STRENGTHEN CASH FLOW MANAGEMENT IN LISTED RETAIL ENTERPRISES IN VIETNAM

3.1. Context and emerging requirements

Internationally, post-pandemic inflation forced major central banks to tighten monetary policy in 2022 and 2023, causing global interest rates to rise rapidly and the US dollar to strengthen. This pressure spread to the domestic market through interest rate and exchange rate channels, raising the cost of short-term loans financing working capital and the cost of imported goods. Supply chain disruptions led enterprises to increase safety stocks, pushing up DIO, while sharp oil price swings in 2022 caused the working capital needs of the petroleum group to fluctuate with each price adjustment cycle. Domestically, the orientation towards developing e-commerce and modern retail requires enterprises to continuously expand outlets, warehouses and distribution systems, increasing investment needs through CFI. New outlets must be fully stocked before reaching capacity, so DIO tends to rise in the initial phase, while the online channel, with a high share of cash on delivery, lengthens DSO. This context gives rise to three requirements. At the operational level, enterprises must control the CCC more tightly, with priority on DIO. At the strategic level, enterprises must balance CFI against CFO and limit the use of short-term borrowing to fund long-term investment. In terms of forecasting, cash flow plans must be prepared under multiple scenarios and updated regularly.

The degree of challenge differs among the three groups. The consumer goods and ICT group faces the risk of rising DSO as the share of cash on delivery in the online channel remains high, while technology products lose value quickly, turning excess inventory into losses. The automobile group faces the greatest challenge from the cost of capital, as high-value inventory is financed by short-term borrowing, while car demand depends on manufacturers' policies and registration fees. The petroleum group has fast turnover but thin margins and must control wholesale customer

receivables and maintain mandatory reserves as the value of inventory changes with each price adjustment cycle.

3.2. Perspective of the PhD candidate

Since the CCC components affect ROE directly rather than through free cash flow, the PhD candidate holds that CFM in retail enterprises should be viewed first and foremost as an operational tool tied to the characteristics of each segment. The system of solutions therefore takes the five CFM components as its main axis, differentiates across the three industry groups within each component, derives each solution from a specific limitation, and is supplemented by two foundational solutions on managerial capacity and technology. This perspective is consistent with the fact that FRT maintained negative operating cash flow while expanding the Long Châu chain, HUT allocated most of its surplus to its automobile ecosystem and MWG continuously reinvested in the Bách Hóa Xanh chain, making the expectation of a free cash flow reserve as an intermediate buffer inappropriate.

3.3. Solutions to strengthen cash flow management

3.3.1. Solutions for establishing the receipt and payment mechanism

The general principle is to accelerate collections and reasonably defer payments within the granted credit terms. The consumer goods and ICT group should develop an internal credit scoring system for instalment customers based on payment history and purchasing behaviour, allocate limits by risk level, and combine it with an ageing schedule to trigger automatic alerts when the overdue ratio exceeds a threshold. The automobile group should move to progress-based payments tied to delivery milestones and reconcile the borrowing limit for each import batch with the actual sales speed. The petroleum group should set fixed credit limits for each group of industrial customers and agents and separate the authority of the sales department from that of the credit risk monitoring function, thereby curbing the tendency, noted by the experts, to loosen credit limits to boost sales in difficult markets. In all three groups, the maximum allowable payment deferral should be specified separately for strategic and ordinary suppliers.

3.3.2. Solutions for determining the optimal cash reserve level

The solution is to add quantitative tools suited to each group, with operating experience serving as a calibration layer. The consumer goods and ICT group should take Stone's (1972) forecasting mechanism as the main axis to proactively raise the reserve threshold ahead of known peak periods, combined with the Miller and Orr (1966) control band for random fluctuations. The automobile group should apply a three-step procedure that determines working capital needs over one import cycle, adds a safety factor that varies with purchasing power volatility, then compares the result with existing credit lines and shortens the credit line renewal cycle, enabling enterprises to expand their buffers before difficulties arise rather than requesting more after shortfalls occur. Jewellery retailers, whose assets are highly liquid, should follow the approach of the consumer group. The petroleum group should keep its low cash balance in line with industry characteristics but make it proactive through a minimum buffer calculated as a number of days of average operating costs based on existing techno-economic norms, with more days for enterprises whose collection period is highly volatile, such as GCB. This approach preserves the low cash balance but replaces the reactive mechanism with a predetermined threshold sufficient to absorb collection delays without additional borrowing every time receivables are collected later than planned.

3.3.3. Solutions for cash flow planning

Enterprises should prepare optimistic, baseline and pessimistic scenarios simultaneously for each planning period. The consumer group applies scenarios at the short-term horizon, preparing three purchase volume levels before each peak period and linking each scenario to a first-week sales threshold for adjusting subsequent orders. The automobile group applies scenarios at the medium-term horizon with policy variables such as registration fees and consumer credit. The petroleum group applies a rolling approach, detailed at the short-term horizon and aggregated at the long-term horizon, with oil prices and the price adjustment schedule as the key variables. For large enterprises, scenario calculation can be automated based on

historical data, although the decision to switch scenarios remains with the finance department.

Cash flow plans should be linked directly to purchasing decisions through a DIO ceiling, as DIO is the component with the strongest negative effect on ROE. When a purchasing decision is expected to push DIO above the ceiling, the enterprise splits the order into several batches or delays outlet openings, unless a financing source has been identified in advance. The ceiling is set by product category in the consumer group and by vehicle line in the automobile group, while the petroleum group sets a floor according to mandatory reserve regulations.

3.3.4. Solutions for implementation and control of cash flows

The solution is to narrow the technology gap according to each group's capacity rather than investing uniformly. Consumer enterprises with existing infrastructure should upgrade to a multi-scenario cash flow forecasting system integrated with their enterprise resource planning system, while enterprises with limited resources should start by standardising the payment flow matrix. The automobile group should build automatic alerts linking delivery progress with payment schedules and a system consolidating balances across member companies. The petroleum group should connect data from measuring equipment at stations to the accounting system for automatic cash flow reconciliation. Enterprises lacking the resources to apply three lines of defence may use a two-line model that separates operations from independent oversight.

Alongside technology, enterprises should include the CCC and each of its components in monthly management reports rather than tracking them only annually, assigning responsibility for each component to the relevant department, with purchasing responsible for DIO, sales for DSO and finance for DPO. Reconciliation between accounting documents, bank statements and internal cash flow reports should be performed weekly to detect deviations from the plan early, while the plan is updated on a rolling basis.

3.3.5. Solutions for evaluating and handling surpluses and deficits

The solution is to establish an explicit order of priority in the spirit of Myers (1984). For surpluses, step one is to repay borrowings, especially floating-rate short-term debt, consistent with the negative effect of LEV. Step two is to distribute to shareholders, distinguishing stable surpluses from one-off surpluses to choose the appropriate instrument. Step three is to reinvest only when the investment has a positive net present value, following Jensen (1986), and does not lengthen the CCC. The consumer group should place greater weight on step one to avoid increasing leverage alongside expansion, the automobile group should balance steps one and three, and state-owned petroleum enterprises should make the required fund appropriations before applying the three steps. For deficits, temporary deficits are handled through existing short-term credit lines, structural deficits through asset restructuring such as releasing slow-moving inventory, and only deficits linked to long-term investment through long-term borrowing or equity. Enterprises may also use asset-based financing, with inventory or receivables as collateral.

The application of the deficit-handling order also differs among the groups. The consumer group, with its large scale and good credit relationships, can rely mainly on short-term credit lines for temporary deficits but should avoid repeated large-scale borrowing. The automobile group should prioritise step two, releasing slow-moving high-value inventory before borrowing more, while making use of dealer financing programmes from manufacturers. The petroleum group, where deficits are linked to mandatory reserves and wholesale receivables, should combine preferential credit with tight control of receivables, learning from how BMF prevents deficits through its asset structure.

3.3.6. Solutions for improving managerial and operational capacity

Enterprises should treat CFM as a cross-organisational function. The focus is on linking the performance indicators of sales departments to receivables quality and inventory turnover alongside sales, establishing regular coordination among finance, purchasing and sales when planning purchases, and training finance staff in forecasting and scenario analysis. Enterprises should build a culture of transparent

reporting and disciplined compliance with the receipt and payment regulations, especially at new branches during expansion, where the experts observed the most shortcomings. The control model should be proportionate to size, with industry leaders applying three lines of defence and other enterprises applying two lines with periodic internal audits.

3.3.7. Solutions for applying information technology

The consumer group should prioritise automating the reconciliation of cash on delivery with logistics partners to shorten the DSO of the online channel. The automobile group needs a system consolidating the financial data of member units and connection gateways with manufacturers and banks. The petroleum group should prioritise cashless payments and synchronise e-invoices with the accounting system to control cash flows at each station. The two foundational solutions are complementary, as technology provides the data while managerial capacity determines how the data are used for decision-making. A modern system operated by untrained staff will not generate value commensurate with its investment cost.

3.4. Conditions for implementing the solutions

On the part of the State, the dissertation proposes four groups of conditions. First, improve premises procedures through the digitalisation of land procedures and a centralised planning database, helping enterprises plan cash flows for new outlets more accurately, while investing in regional logistics hubs to shorten goods turnover time and support DIO control. Second, improve financial and credit policies to suit the current-asset-heavy structure of retail enterprises, including size-differentiated tax incentives, credit based on supply chains, sales invoices and historical cash flows, together with guidance on valuing and monitoring revolving inventory used as collateral. Third, stabilise interest rates, consistent with the finding on the strong negative effect of financial leverage, and expand exchange rate hedging instruments for small and medium-sized enterprises with a high share of imported goods. Fourth, strengthen the role of industry associations in disseminating policies and conveying enterprises' difficulties to regulators.

On the part of enterprises, the decisive condition is proactive adaptability. Enterprises should assess their own financial foundation to choose an appropriate implementation pace, diversify financing through the capital market and multiple banks, be flexible in their investment models, such as outsourcing logistics, sharing warehouses or franchising to convert part of CFI into operating expenses, encourage small petroleum enterprises to cooperate in pooling purchasing and transport needs, and proactively reduce the share of floating-rate short-term borrowing during unstable periods. Enterprises with a solid equity base can implement several solutions simultaneously, while those still accumulating capital should prioritise low-cost solutions first, such as standardising the receipt and payment mechanism and scenario-based planning. Transparent financial reporting and standardised inventory and receivables data will also prepare enterprises to access supply-chain-based credit products as soon as banks introduce them.

CONCLUSION

Cash flow management in listed retail enterprises has become a strategic management function that determines their ability to maintain liquidity and sustainable profitability. The dissertation has achieved its research objectives.

Theoretically, the dissertation develops a CFM framework comprising five circularly related components and a two-level analytical framework suited to retail enterprises.

Regarding the current state, based on a sample of 23 enterprises over the period 2017 to 2024, enterprises have industry-specific receipt and payment mechanisms but have not used quantitative tools to determine cash reserve levels. Cash flow plans are mostly based on a single scenario, and the handling of surpluses and deficits lacks an order of priority.

Empirically, inventory days and collection days negatively affect return on equity, while the payables period has a positive effect. Financial leverage has a consistently negative effect. Free cash flow plays neither a mediating nor a moderating role. The experts' opinions are consistent with these results.

Regarding solutions, the dissertation proposes five solutions under the five CFM components differentiated across three industry groups, two foundational solutions and the conditions for implementation.

The dissertation has limitations in sample size, data frequency and the number of experts. Future research could use dynamic regression models and quarterly data, extend to unlisted retail enterprises and clarify the relationship between cash flow quality and firm value. The PhD candidate respectfully looks forward to receiving comments from the academic council and scholars so that the dissertation can be further improved.

**LIST OF THE AUTHOR'S PUBLISHED SCIENTIFIC WORKS
RELATED TO THE DISSERTATION**

1. Pham Duc Viet (2026), Cash flow management in Vietnamese retail enterprises, *Journal of Economics and Finance*, Issue 3, January 2026.
2. Pham Duc Viet (2026), Cash flow management in listed retail enterprises in Vietnam, *Journal of Economics and Finance*, Issue 1, February 2026.
3. Pham Duc Viet (2026), Working capital structure and multidimensional financial performance, segment-specific differentiation in Vietnam's retail industry, *State Management Electronic Journal*.
4. Pham Duc Viet (2026), Working capital management and profitability, empirical evidence from listed retail enterprises in Vietnam, *State Management Electronic Journal*.