

Ukrainian State University of Railway Transport

Department of Management, Public Administration and HR Technologies

DESIGNING A MULTILEVEL SYSTEM FOR MANAGING THE EFFICIENCY OF FINANCIAL FLOWS IN THE SUPPLY CHAIN

Explanatory Report and Analytical Calculations
to the Master's Qualification Thesis
under the educational program "Sustainable Logistics and Supply Chain Management"
specialty 073 "Management"

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ABSTRACT

This qualification work includes 12 presentation slides, 65 pages of explanatory notes in A4 format and 75 references, summarising the results of research on financial flow management in the supply chain.

Keywords: FINANCIAL FLOWS, SUPPLY CHAIN, LOGISTICS, MULTILEVEL MANAGEMENT SYSTEM, EFFICIENCY, WORKING CAPITAL.

The object of the study is the processes of financial flow management in the supply chain of Metro Cash & Carry.

The aim of the paper is to substantiate and develop a multilevel system for managing the efficiency of financial flows in the supply chain of Metro Cash & Carry in order to enhance liquidity, optimize working capital, and ensure transparency of financial processes.

The paper examines the theoretical foundations of financial flow management in logistics systems, summarizes modern approaches to coordinating financial and material flows in large retail networks, and identifies the key factors influencing financial flow efficiency.

Based on the analysis of Metro Cash & Carry's operations, indicators of financial performance, liquidity, and turnover are assessed, and a system of indicators for monitoring and forecasting the efficiency of financial flows is developed.

A methodology for forming a multilevel financial flow management system is proposed, along with practical recommendations aimed at optimizing working capital, aligning financial and logistics decisions, and improving the efficiency of enterprise resource utilization.

The results of the study can be applied in the activities of large retail enterprises to improve financial flow management systems, strengthen financial stability, and enhance the effectiveness of supply chain management.

АНОТАЦІЯ

Дана кваліфікаційна робота включає 12 слайдів презентації, 65 аркуша пояснювальної записки формату А4 та 75 використаних літературних джерел, у якій узагальнено результати дослідження з управління фінансовими потоками в ланцюгу постачання.

У роботі використано аналітичні, графічні та порівняльні методи дослідження, а також опрацьовано сучасні наукові джерела з логістики та фінансового менеджменту.

Ключові слова: ФІНАНСОВІ ПОТОКИ, ЛАНЦЮГ ПОСТАЧАННЯ, ЛОГІСТИКА, БАГАТОРІВНЕВА СИСТЕМА УПРАВЛІННЯ, ЕФЕКТИВНІСТЬ, ОБОРОТНИЙ КАПІТАЛ.

Об'єктом дослідження є процеси управління фінансовими потоками в ланцюгу постачання підприємства Metro Cash & Carry.

Метою роботи є обґрунтування та розроблення багаторівневої системи управління ефективністю фінансових потоків у ланцюгу постачання Metro Cash & Carry з метою підвищення ліквідності, оптимізації оборотного капіталу та забезпечення прозорості фінансових процесів.

У роботі розглянуто теоретичні засади управління фінансовими потоками в логістичних системах, узагальнено сучасні підходи до координації фінансових і матеріальних потоків у великих роздрібних мережах та визначено фактори, що впливають на ефективність фінансового потоку.

На основі аналізу діяльності Metro Cash & Carry здійснено оцінку показників фінансової результативності, ліквідності та оборотності, а також сформовано систему індикаторів для моніторингу та прогнозування ефективності фінансових потоків.

Розроблено методику формування багаторівневої системи управління фінансовими потоками та надано практичні рекомендації щодо оптимізації оборотного капіталу, узгодження фінансових і логістичних рішень та підвищення ефективності використання ресурсів підприємства.

Отримані результати можуть бути використані в діяльності великих торговельних підприємств для вдосконалення системи управління фінансовими потоками, підвищення фінансової стійкості та ефективності управління ланцюгами постачання.

Ukrainian State University of Railway Transport

Faculty of Economics

Department of Management, Public Administration and HR Technologies


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APPROVED

Head of Department
Professor, Doctor of Economics

 Olena DYKAN
September 09, 2025.

ASSIGNMENT FOR THE MASTER'S QUALIFICATION WORK

Alla Ivashchenko

1 Topic «Designing a Multilevel System for Managing the Efficiency of Financial Flows in the Supply Chain»

Supervisor STOROGHILOVA Ylyana, PhD in Economics, Associate Professor approved by the Order of the Faculty of Economics dated February 07, 2025 No. 58/25

2 The deadline for submission of completed work by a higher education applicant is December 12, 2025

3 Initial data, Explanatory notes, and reports on the production and economic activities of the enterprise for 2021–2024; enterprise reporting for 2021–2024; regulatory, legislative, and scientific literature on strategic management and logistics activities.

4 Content of the calculation and explanatory note (list of issues to be developed)

The essence of financial flows in logistics systems and their role in ensuring supply chain efficiency. Theoretical approaches and models for managing financial flows at operational, tactical, and strategic levels. The organizational and economic characteristics of Metro Cash & Carry as an object of research and a supply chain participant. The structure and types of the company's financial flows, including cash inflows, expenditures, investment flows, and credit flows. The analysis of the efficiency of Metro Cash & Carry's financial flows using indicators such as turnover, liquidity, solvency, and cost efficiency. Identification of weaknesses, bottlenecks, and inefficiencies in the current financial flow management system of the company. The assessment of risks within financial flows that affect the stability and continuity of supply chain operations. The justification for developing a multilevel financial flow management system tailored to the specifics of Metro Cash & Carry's retail and logistics activities. The design of a multilevel model of financial flow management with a description of the functions of each management level. The evaluation of the

effectiveness of the proposed system and formulation of recommendations to improve financial flow management within the company's supply chain.

5 List of graphic material

1 Theoretical Foundations of the Study of Logistics and Supply Chain Cost Management.

2 Analysis of the Economic and Financial activities of Metro Cash and Carry in the Context of financial flow management.

3 Designing a multilevel system for managing financial flow efficiently in the supply chain of Metro Cash & Carry.

6 Individual Section Consultants

Section	Surname, initials, title and academic degree Consultant	Signature, date	
		The task was issued by	task Took

7 Assignment Date September 09, 2025

CALENDAR PLAN

Stage name	Deadline for the implementation of the stages of work	Note
1 Theoretical Foundations of the Study of Logistics and Supply Chain Cost Management	10.10.2025	
2 Analysis of the Economic and Financial activities of Metro Cash and Carry in the Context of financial flow management	05.11.2025	
3 Designing a multilevel system for managing financial flow efficiently in the supply chain of Metro Cash & Carry	08.12.2025	
Graphic part	10.12.2025	

Higher education applicant



Alla IVASHCHENKO





Head



Ylyana STOROGHILOVA

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Rev.	Sheet	Document No.	Signature	Date					
Prepared by	Ivashchenko A.V.				Designing a Multilevel System for Managing the Efficiency of Financial Flows in the Supply Chain		Ref..	Sheet	Sheets
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