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LEGAL AND FINANCIAL FRAMEWORKS FOR ASSET MODERNIZATION AND FLEET LOCALIZATION: A CASE STUDY OF "TASHKENT METRO" SUE

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Abstract. This article evaluates the legislative landscape and budgetary mechanisms governing the financial sustainability, infrastructure expansion, and rolling stock modernization of the "Tashkent Metro" State Unitary Enterprise (SUE). Amid rigid tariff caps and rising market costs, public transit systems face structural deficits. Through an analysis of the Law "On Urban Passenger Transport", subsequent Cabinet of Ministers resolutions, and Presidential Decrees, this study highlights how the Uzbek state offsets operational losses via targeted subsidies, automates fare collection, and finances extensive fleet renewal. Empirical financial data from 2014 to 2024 shows that the state allocated over $58.8 million and 216.7 billion UZS for carriage modernization, successfully extending the operational lifespan of 156 depreciated subway cars by 15 years. Furthermore, the funding matrix for the Yunusabad line expansion underscores a balanced combination of centralized state investments and credit facilities from the Fund for Reconstruction and Development (FRD).

Keywords: Tashkent Metro, Localization Financing, Subsidization Framework, Capital Expenditure (CapEx), Rolling Stock Modernization, Infrastructure Bonds, Automated Fare Collection (AFC).

Introduction

In regulated public utility frameworks, maintaining financial stability while undertaking large-scale infrastructure projects requires a rigid legal foundation. For the "Tashkent Metro" SUE, this structure serves three main purposes: absorbing operational losses caused by state-capped passenger tariffs, funding the technological modernization of rolling stock to extend its operational life, and deploying capital for lines and station extensions.

The socio-economic imperative of urban rail transit limits the use of purely commercial pricing models. Therefore, state intervention becomes necessary to balance public affordability with the financial health of transit operators. This study explores the statutory instruments and numerical allocations that drive the modernization and financial balancing mechanisms of Tashkent's metro network.

Statutory instruments for loss compensation and tariff subsidies

The baseline mechanism for balancing the financial sheet of "Tashkent Metro" originates from the Law of the Republic of Uzbekistan No. 419-I *"On Urban Passenger Transport"* dated April 25, 1997.

- **Article 12** delegates the authority to establish and regulate accessible passenger tariffs to local government bodies (*hokimiyats*).
- **Article 15** dictates that operational losses resulting from these state-imposed tariff ceilings must be systematically reimbursed through the respective local budgets under a framework managed by the Cabinet of Ministers.

To modernize this compensation model, the Cabinet of Ministers enacted **Resolution No. 273** (September 17, 2012), establishing a protocol to determine passenger turnover and distribute state subsidies. This mechanism guarantees compensation for:

1. Unrealized revenue stemming from fare exemptions and privileges granted to specific demographics (e.g., free off-peak travel for retirees between 10:00 and 16:00).
2. The structural deficit between the actual operational cost (*tannarx*) and the legally mandated passenger fare.

Reimbursements are calculated monthly based on annual inventory censuses of privileged citizens and verified transit smart-card sales data. At the end of each quarter, operators and local financial authorities cross-reference advanced funds against actual losses. If the net difference is zero or positive (denoting a surplus), state compensation is withheld.

Digital integration and automated fare collection (AFC)

Through **Cabinet of Ministers Resolution No. 948** (November 25, 2019), the financial allocation model underwent a significant transformation with the introduction of an Automated Fare Collection (AFC) system. This integration redefined the structural components of public transit pricing by legalizing dynamic tariff plans and standardizing electronic payment methods across both surface and subsurface networks.

The decree legally classified two main digital instruments:

- **Transport card:** A multi-use debit token that calculates fare processing by multiplying standard capped tariffs, applicable transfers, and systemic discounts against total passenger trips.
- **Privileged transport card:** A personalized or non-personalized digital token registered within the AFC Operator's database, granting standard 50% discounts or complete fare exemptions to eligible demographics (pensioners, students, disabled individuals, and secondary education pupils) without limiting daily transfers.

Empirical evaluation of capital allocations for rolling stock modernization

A key challenge for the "Tashkent Metro" is dealing with structural rolling stock depreciation. To mitigate the capital costs of importing new fleets, the state prioritized localized modernization over asset replacement, extending the lifecycle of older carriages by 15 years.

Between 2014 and 2016, a series of government orders funneled significant capital into repairing and overhauling 112 metro carriages:

Table 1: Financial Allocations for Fleet Lifecycle Extension (2014–2016)

#	Legislative Decree	Target Fleet (Carriages)	Allocated Capital (USD)	Reallocated / Utilized Capital (USD)	Equivalent Local Currency (Million UZS)
1	CMR No. 170-f (2014)	6	$2,973,000	$2,973,000	6,710.7
2	CMR No. 190-f (2015)	10	$5,500,000	$5,500,000	13,696.1
3	CMR No. 24 (2016)	96	$50,400,000	$30,740,600	170,201.9

Following these initial overhauls, the focus shifted toward embedding modernization goals into multi-year national social and production infrastructure strategies:

Table 2: Budgetary Financing Under Infrastructure Development Programs (2021–2024)

#	Presidential Decree	Fleet Target & Action Profile	Allocated Capital (Million UZS)	Fiscal Cycle Year	Net Utilization (Million UZS)
1	**PP-4936** (2020)	Lifespan Extension (28 Units)	92,000.0	2021	92,000.0
2	**PP-98** (2022)	Lifespan Extension (8 Units)	44,700.0	2022	44,700.0
3	**PP-98** (2022)	Indigenous New Production (20)	80,000.0	2022	80,000.0

Takeaway: Over these programmatic cycles, the state successfully deployed 216.7 billion UZS to extend the utility of 36 existing carriages and expand domestic production capacity by 20 new cars.

Financing matrices for network expansion

Beyond fleet updates, expanding the physical network requires major capital injections. The funding matrix for Phase II of the Yunusabad Line expansion provides an instructive case study. Executed under Presidential Decree **PP-2653** (November 7, 2016), the project required a total capital expenditure equivalent to **$124.8 million**.

The project balanced the load across two main financing sources:

The $52.8 million credit line from the FRD was routed through the National Bank for Foreign Economic Activity of Uzbekistan (NBU). This facility featured highly concessional terms, including an annual interest rate of 2.25% (inclusive of a 0.25% commercial banking margin), a 15-year total amortization period, and a
4-year grace period on principal repayment. This debt structure was specifically designed to cover foreign currency expenses, including importing highly specialized technical components, hiring foreign consultants, and procuring heavy construction machinery.

Conclusion

The “Tashkent Metro” SUE operates under a structured legal and financial model where public transit accessibility is balanced by state support. Legislative mandates like Law No. 419-I and Resolution No. 273 help insulate the operator from market price volatility. Concurrently, targeted allocations via Presidential Decrees have proved effective in modernizing aging rolling stock, deferring major replacement costs while expanding the network through a mix of centralized budget investments and long-term concessional credit lines.

References

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