



**№3**

# **MOLIYAVIY TEXNOLOGIYALAR**

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# “MOLIYAVIY TEXNOLOGIYALAR” ILMIY ELEKTRON JURNALI TAHRIRIYAT KENGASHI RAISI

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## FINANCING DECISIONS AND VALUE CREATION IN AN EMERGING ECONOMY: EVIDENCE FROM THE CAPITAL STRUCTURE OF UZAUTO MOTORS

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**Abstract.** This paper shows how UzAuto Motors, Uzbekistan’s largest carmaker, structured its financing between 2021 and 2023, drawing on the firm’s audited IFRS statements. A time-series reading of its leverage and profitability ratios is used to test whether the company’s financing choices are consistent with the leading theories of capital structure within a young, rapidly reforming economy. The evidence indicates that the firm kept its financial leverage moderate and deliberately managed, depended substantially on the operational liabilities that are characteristic of the automotive industry, and reinforced its equity base during periods of consolidation. As profitability strengthened, so did the firm’s capacity to service debt, allowing borrowing decisions that added rather than destroyed value. Taken together, the case illustrates how companies operating in transitional markets combine debt, equity, and operational financing in pursuit of durable value creation.

**Keywords:** capital structure; firm value; financial leverage; debt-to-equity ratio; profitability; operational liabilities; trade-off theory; pecking-order theory; emerging markets; UzAuto Motors; Uzbekistan.

## RIVOJLANAYOTGAN IQTISODIYOTDA MOLIYALASHTIRISH QARORLARI VA QIYMAT YARATISH: UZAUTO MOTORS KAPITAL TUZILMASI MISOLIDA

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**Annotatsiya.** Ushbu maqolada O‘zbekistonning eng yirik avtomobil ishlab chiqaruvchisi “UzAuto Motors” 2021 va 2023-yillar oralig‘ida o‘z moliyalashtirishini kompaniyaning auditorlik tekshiruvidan o‘tgan MHXS hisobotlariga asoslanib qanday tuzganligi ko‘rsatilgan. Kompaniyaning moliyalashtirish tanlovlari yosh, tez isloh qilinayotgan iqtisodiyotda kapital tuzilishining yetakchi nazariyalariga mos kelishini tekshirish uchun uning richagi va rentabellik koeffitsiyentlarini vaqt qatori bo‘yicha hisoblashdan foydalaniladi. Dalillar shuni ko‘rsatadiki, firma moliyaviy dastakni mo‘tadil saqlagan va ongli ravishda boshqargan, avtomobilsozlik sanoatiga xos bo‘lgan operatsion majburiyatlarga sezilarli darajada bog‘liq bo‘lgan hamda konsolidatsiya davrlarida o‘z kapital bazasini mustahkamlagan. Rentabellik oshgani sari, firmaning qarzga xizmat ko‘rsatish qobiliyati ham oshib bordi, bu esa qiymatni yo‘q qilish o‘rniga uni oshiradigan qarz qarorlarini qabul qilishga imkon berdi. Umuman olganda, bu misol o‘tish bozorlarida faoliyat yurituvchi kompaniyalar uzoq muddatli qiymat yaratishga intilib, qarz, xususiy kapital va operatsion moliyalashtirishni qanday birlashtirishini ko‘rsatadi.

**Kalit so‘zlar:** kapital tuzilmasi; firma qiymati; moliyaviy dastak; qarzning xususiy kapitalga nisbati; rentabellik; operatsion majburiyatlar; kelishuv nazariyasi; buyurtma nazariyasi; rivojlanayotgan bozorlar; UzAuto Motors; O‘zbekiston.





## **ФИНАНСОВЫЕ РЕШЕНИЯ И СОЗДАНИЕ СТОИМОСТИ В РАЗВИВАЮЩЕЙСЯ ЭКОНОМИКЕ: ДОКАЗАТЕЛЬСТВА ИЗ СТРУКТУРЫ КАПИТАЛА UZAUTO MOTORS**

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**Аннотация.** В данном документе показано, как UzAuto Motors, крупнейший автопроизводитель Узбекистана, структурировал свое финансирование в период с 2021 по 2023 год, опираясь на проверенную отчетность фирмы по МСФО. Чтение временных рядов его рычагов и коэффициентов рентабельности используется для проверки соответствия выбора финансирования компании ведущим теориям структуры капитала в молодой, быстро реформирующейся экономике. Данные свидетельствуют о том, что фирма сохраняла умеренный финансовый рычаг и управляла им осознанно, в значительной степени зависела от операционных обязательств, характерных для автомобильной промышленности, и укрепляла свою собственную базу в периоды консолидации. По мере укрепления прибыльности увеличивалась и способность фирмы обслуживать долги, что позволяло принимать решения о заимствованиях, которые добавляли, а не уничтожали стоимость. В совокупности этот случай иллюстрирует, как компании, работающие на переходных рынках, объединяют долговое, собственное и операционное финансирование в стремлении к созданию устойчивой стоимости.

**Ключевые слова:** структура капитала; стоимость фирмы; финансовый рычаг; коэффициент долга к собственному капиталу; рентабельность; операционные обязательства; теория компромисса; теория пикинга; развивающиеся рынки; UzAuto Motors; Узбекистан.

### **Introduction**

Capital structure remains one of the most debated topics in corporate finance, with theories such as Modigliani–Miller, trade-off theory, pecking-order theory, and signalling theory offering contrasting explanations of how firms choose between debt and equity. While these frameworks are well established in developed markets, far less is known about how firms in emerging economies—where financial markets are less mature, information asymmetries are greater, and operational liabilities play a larger financing role—adjust their capital structure in practice. Uzbekistan, undergoing rapid market reforms since 2017, presents a unique environment to examine these dynamics.

This study investigates the capital structure of UzAuto Motors, the country’s largest automotive manufacturer, over the period 2021–2023. Using audited IFRS statements, the research evaluates how the firm's leverage evolved through post-pandemic recovery, supply-chain pressures, and macroeconomic adjustment. The analysis addresses three central questions: (1) how UzAuto Motors’ capital structure changed over time and whether these changes align with capital structure optimisation theories; (2) how the firm’s leverage ratios relate to profitability indicators such as ROA, ROE, EBITDA margin, and net profit margin; and (3) whether the firm’s mix of long-term debt and operational liabilities enhances or constrains firm value.

The study meets these objectives by conducting a time-series ratio analysis of key leverage and performance indicators. In doing so, it contributes to capital structure literature from an emerging-market perspective and offers practical insights for financial managers, investors, and policymakers seeking to understand how firms in transitional economies balance debt, equity, and operational liabilities to support long-term value creation.





### **Research questions**

This research paper is looking to answer the following questions.

- I. How has UzAuto Motors’ capital structure evolved between 2021 and 2023, and to what extent does it align with capital structure optimisation theories such as the trade-off theory, pecking-order theory, and signalling theory?
- II. What is the relationship between UzAuto Motors’ capital structure (D/E, long-term capitalisation, leverage) and its profitability indicators (ROA, ROE, EBITDA margin, net profit margin)?
- III. Does the firm’s pattern of leverage—particularly the use of long-term debt versus operational liabilities—enhance or weaken firm value during the period analysed?

### **Objectives of the Study**

- To examine the changes in UzAuto Motors’ capital structure from 2021 to 2023 using IFRS financial statements.
- To evaluate whether the firm’s financing behaviour is consistent with established capital structure theories, including Modigliani–Miller, trade-off theory, and pecking-order theory.
- To analyse how profitability indicators (ROA, ROE, EBITDA margin, net profit margin) influence the firm’s leverage decisions and debt-carrying capacity.
- To identify the role of operational liabilities (customer advances, trade payables) versus financial debt in shaping overall leverage and working-capital dynamics.

### **Significance of the Study**

This study provides rare empirical evidence from Uzbekistan, offering insight into how firms in an emerging and reforming economy manage capital structure under credit constraints and heavy reliance on operational liabilities. By analysing UzAuto Motors’ financing decisions, the research extends classical capital structure theories to a real-world transitional context and shows how profitability, leverage composition, and working-capital dynamics interact in shaping firm value. The findings are valuable for firms seeking to improve financial planning, for policymakers aiming to strengthen financial-market reforms, and for investors assessing risk and creditworthiness in under-researched markets.

### **Literature Review**

The classical Modigliani–Miller (MM) theorem argues that in a perfect, tax-free capital market, a firm’s value is independent of its financing structure. This suggests that leverage decisions do not influence firm performance. However, when corporate taxes are introduced, Modigliani and Miller revised their theory to show that debt financing becomes value-enhancing because interest payments are tax-deductible, lowering the firm’s overall cost of capital. This creates an incentive for firms to rely more heavily on debt.

Later extensions highlight the limitations of the MM framework in real-world markets. Ross proposed that debt issuance can send positive signals to investors, as only firms confident in their future cash flows would take on additional debt. In contrast, Acharya and Richardson and others warn that excessive leverage increases perceived risk, raises borrowing costs, and may restrict access to new funds—illustrating that the relationship between debt and firm value is non-linear.

Recognising these practical frictions, Miller introduced the trade-off theory, which argues that firms choose their capital structure by balancing the tax benefits of debt against bankruptcy and financial distress costs. Stiglitz emphasised that firm value is maximised when the marginal tax shield equals marginal expected bankruptcy costs. Empirical research by Warner, Altman, and Kim supports this argument, demonstrating that as firms accumulate debt, financial distress risk rises disproportionately once a threshold is crossed. Thus, optimal capital structure is achieved when firms reach equilibrium between debt advantages and risks.





Firm-specific and macroeconomic factors play a large role in shaping capital structure choices. Growth opportunities, liquidity, and firm size influence financing behaviour, the cost of capital, and access to credit. Chada and Sharma argue that high-growth firms prefer short-term debt to minimise agency costs, a view supported by Martis and Akhter et al., who find growth positively associated with performance.

Liquidity also affects financing decisions. Khanna & Puri found a significant positive effect of liquidity on firm performance, arguing that solvency improves lenders' perception of firm strength. However, Musah and Strebulaev show that high liquidity may reduce profitability, consistent with dynamic trade-off theory, which suggests that profitable firms hold less debt.

Inflation further complicates capital structure choices. While Khanna & Puri report a positive link between inflation and profitability, Roberts et al. and Martis argue that inflation erodes returns and raises uncertainty, thereby discouraging leverage.

The literature indicates that capital structure optimisation is context dependent. While debt provides tax benefits and can enhance firm value, excessive leverage raises distress risk. The consensus across theories and empirical findings is that the optimal capital structure lies at the intersection of tax advantages, risk tolerance, profitability, and external economic conditions. As such, firms must continuously adjust financing decisions to align with their operational performance and macroeconomic environment.

### Research gap

Despite extensive global research on capital structure optimisation, there is limited empirical evidence from emerging economies, particularly those undergoing rapid institutional reforms such as Uzbekistan. Existing studies rarely examine how firms in such environments balance financial debt and operational liabilities, or how profitability influences leverage under conditions of market imperfections, credit frictions, and evolving financial regulations. No prior research has investigated these dynamics for UzAuto Motors, the country's largest industrial firm, leaving a gap in understanding how capital structure decisions affect firm value in a transitional economy.

This study fills that gap by analysing the firm's real-world financing behaviour through the lens of classical and modern capital structure theories.

### Research Hypothesis

**Hypothesis 1.** UzAuto Motors' capital structure adjustments between 2021 and 2023 are consistent with capital structure optimisation theories (trade-off theory, pecking-order theory, signalling theory).

**Hypothesis 2.** There is a positive relationship between profitability indicators (ROA, ROE, EBITDA margin, net profit margin) and the firm's leverage capacity.

**Hypothesis 3.** The firm's mix of long-term debt and operational liabilities has a significant effect on firm value, with strategic use of debt enhancing value and excessive reliance on operational liabilities constraining it.

### Research methodology

This study adopts a quantitative research design to analyse how UzAuto Motors' capital structure evolved between 2021 and 2023. A time-series ratio analysis is used to evaluate changes in leverage and assess whether financing behaviour aligns with capital structure theories and firm-value maximisation principles.

### Data

The analysis relies exclusively on audited IFRS Consolidated Financial Statements of UzAuto Motors for 2021–2023, which provide consistent and reliable information from:

- Statement of Financial Position
- Statement of Profit or Loss





- Cash Flow Statement
- Statement of Changes in Equity
- Notes to the financial statements

These statements reflect the company’s financial decisions during a period of macroeconomic reform and stabilisation in Uzbekistan, making them suitable for examining short-term capital structure dynamics.

### Research model

Capital structure is evaluated using standard leverage indicators widely applied in corporate finance research:

Debt-to-Equity Ratio (D/E)

$$D/E = \text{Total Debt} / \text{Total Equity}$$

Long-Term Debt to Total Capitalisation

$$LT \text{ Debt} / (LT \text{ Debt} + \text{Equity})$$

Total Liabilities to Total Assets (Leverage Ratio)

$$\text{Leverage Ratio} = \text{Total Liabilities} / \text{Total Assets}$$

To interpret how profitability influences financing choices, the following performance ratios are computed:

- Return on Assets (ROA)
- Return on Equity (ROE)
- EBITDA Margin
- Net Profit Margin

These are commonly used to assess firm value and debt-carrying capacity in empirical capital structure studies.

### Results and discussions

This section presents an empirical analysis of UzAuto Motors’ capital structure and financial performance from 2021 to 2023, using IFRS financial statements to evaluate how leverage decisions evolved in relation to profitability, liquidity, and firm-value considerations. By examining key financial ratios over time, the analysis provides insight into how the company balances debt and equity to support operational performance and long-term value creation.

**Table 1.**

**Debt-to-Equity Ratio<sup>26</sup>**

Year	Total Debt (LT+ST)	Equity	D/E
2023	459,994	786,713	0.585
2022	312,577	640,809	0.488
2021	328,742	545,146	0.603

The Debt-to-Equity (D/E) ratio indicates the extent to which UzAuto Motors finances its operations through interest-bearing debt relative to equity. Between 2021 and 2023, the D/E ratio remained within a moderate range of 0.49–0.60, reflecting a generally balanced and controlled approach to financial leverage. In 2021, the ratio was 0.603, meaning interest-bearing debt represented roughly 60% of equity. While this level is typical for a capital-intensive manufacturing firm, it nonetheless implies meaningful exposure to borrowing costs and financial risk.

A clear improvement occurred in 2022, when the D/E ratio fell to 0.488. This decline was primarily driven by strong equity growth, likely through retained earnings, combined with a slight reduction in total debt. The result was a stronger capital base and lower sensitivity to interest-rate fluctuations, suggesting that 2022 functioned as a consolidation year during which the company reinforced its financial position.

<sup>26</sup> JSC “UzAuto Motors” Consolidated Financial Statements for the year ended 31 December 2023 and Independent Auditor’s Report <https://www.uzautomotors.com/documents/IFRS-Report-2023FY.pdf>





In 2023, the D/E ratio rose again to 0.585, largely due to a substantial increase in long-term borrowings of nearly USD 100 million. Debt growth outpaced the rise in equity, indicating that the firm may have engaged in significant investment projects, such as capacity expansion or modernization. Although leverage increased, the ratio remained below 1, signalling that the company stayed within conservative financing limits.

Overall, the three-year pattern aligns with trade-off theory, which proposes that firms adjust leverage in response to profitability, investment needs, and financial risk. UzAuto Motors’ D/E dynamics suggest a deliberate balancing of debt benefits (e.g., tax shields, investment funding) against the costs of higher financial obligations, resulting in a capital structure that remains prudent and broadly sustainable.

**Table 2.**
**Long-Term Debt to Total Capitalisation<sup>27</sup>**

Year	LT Debt	Equity	LT Debt / Total Cap
2023	401,032	786,713	0.338
2022	302,707	640,809	0.321
2021	299,915	545,146	0.355

The Long-Term Debt to Total Capitalisation ratio measures the share of permanent financing provided by long-term borrowings rather than equity and is a useful indicator of structural financial risk, given the fixed and extended obligations associated with long-term debt. Across 2021–2023, UzAuto Motors maintained a relatively stable ratio between 0.32 and 0.36, meaning that long-term borrowings consistently accounted for about one-third of its permanent capital structure. This stability reflects a balanced financing approach: the firm avoids both excessive reliance on long-term debt, which would increase financial rigidity, and excessive reliance on equity, which could raise its overall cost of capital.

In 2021, the ratio of 0.355 aligned with the capital needs of a manufacturing firm with ongoing investment requirements. The decline to 0.321 in 2022 resulted mainly from a substantial increase in equity while long-term borrowings remained largely unchanged. This suggests a deliberate strengthening of the capital base, improving solvency and reducing long-term financial risk.

The ratio increased again to 0.338 in 2023, driven by a notable rise in long-term debt. This likely reflects new investment initiatives or refinancing activities. Despite this increase, long-term debt still represents a manageable proportion of total capital, indicating that the firm continues to integrate long-term borrowing into its financing strategy without allowing it to dominate the balance sheet.

The trend suggests that UzAuto Motors employs long-term debt strategically rather than aggressively, using it primarily to support growth, modernization, and long-horizon projects while maintaining a strong equity cushion. This pattern aligns with optimal leverage principles, where firms utilise the benefits of debt (such as tax shields) while preserving financial flexibility and long-term stability.

**Table 3.**
**Leverage Ratio<sup>28</sup>**

Year	Liabilities	Assets	Leverage
2023	2,148,466	2,935,179	0.732
2022	2,647,280	3,288,089	0.805
2021	1,668,093	2,213,239	0.754

The Leverage Ratio measures the share of assets financed through total liabilities, offering

<sup>27</sup> JSC “UzAuto Motors” Consolidated Financial Statements for the year ended 31 December 2023 and Independent Auditor’s Report <https://www.uzautomotors.com/documents/IFRS-Report-2023FY.pdf>

<sup>28</sup> SC “UzAuto Motors” Consolidated Financial Statements for the year ended 31 December 2023 and Independent Auditor’s Report <https://www.uzautomotors.com/documents/IFRS-Report-2023FY.pdf>





a broad view of UzAuto Motors' financing structure. Between 2021 and 2023, the ratio remained high, between 0.732 and 0.805, indicating that liabilities consistently formed a major source of asset financing.

In 2021, the ratio of 0.754 shows that around three-quarters of assets were funded by liabilities, which is typical for automotive manufacturers that rely heavily on supplier credit and customer advances. However, it still reflects a strong dependence on external financing, with implications for liquidity and operational flexibility.

The ratio peaked at 0.805 in 2022, driven largely by a surge in contract liabilities and trade payables. This suggests intensified working-capital pressure and increased reliance on operational liabilities such as customer prepayments. While these provide low-cost financing, they heighten operational risk if production or delivery schedules are disrupted.

In 2023, the ratio declined to 0.732, reflecting the normalisation of contract liabilities and a reduction in overall liabilities. This indicates improved balance-sheet stability and reduced reliance on short-term operational financing.

Overall, UzAuto Motors' leverage is high but largely composed of operational liabilities rather than financial debt, which carries lower immediate financial risk but creates operational vulnerabilities. The sharp increase in 2022 and correction in 2023 highlight the cyclical nature of working-capital financing in the automotive sector, especially in emerging markets reliant on advance payments and supplier credit.

#### *Profitability ratios and their relevance for capital structure:*

Profitability indicators such as ROA, ROE, EBITDA Margin, and Net Profit Margin provide essential insights into a firm's ability to generate returns from its operations and capital base. For UzAuto Motors, these metrics not only reflect operating performance but also explain the firm's capital structure decisions and its overall value creation during 2022–2023.

#### *1. Return on Assets (ROA)*

ROA rose from 7.2% to 11.4%, indicating significant improvement in efficiency. Higher ROA enhances internal financing capacity and reduces reliance on external debt, consistent with pecking-order theory. The 2023 increase in debt therefore stems from strategic investment rather than financial weakness.

High ROA strengthens the firm's ability to carry debt and increases firm value through enhanced operating performance.

#### *2. Return on Equity (ROE)*

ROE increased from 36.8% to 42.4%, far above industry benchmarks. When ROE exceeds the cost of debt, additional borrowing raises shareholder returns through leverage effects, consistent with Modigliani–Miller with taxes and the trade-off theory.

Thus, UzAuto Motors' moderate increase in debt in 2023 appears value-enhancing rather than risky.

#### *3. EBITDA Margin*

EBITDA margin improved from 9.6% to 11.5%, strengthening the company's debt-servicing capacity. Since EBITDA drives interest coverage, this improvement supports higher sustainable leverage and reduces default risk. It also contributes to a lower WACC and higher firm value.

#### *4. Net Profit Margin*

Net profit margin remained stable around 7%, even with strong revenue growth. Stable margins reduce earnings volatility, supporting predictable cash flows and sustainable leverage. This aligns with dynamic versions of the trade-off theory, where consistent profitability allows firms to safely increase borrowing.

### **Conclusion**

This study examined how UzAuto Motors' capital structure evolved between 2021 and 2023 and evaluated its alignment with capital structure theories and firm-value considerations. The





firm maintained moderate leverage, relied strategically on long-term debt, and used operational liabilities as a major source of financing, limiting financial distress risk while increasing operational exposure. Profitability improved across all key indicators, strengthening internal financing capacity, supporting sustainable leverage, and enabling value-enhancing borrowing in 2023. Overall, the firm's behaviour reflects optimal capital structure management: increasing debt when profitability and capacity were strong, and reinforcing equity during consolidation. The results illustrate how firms in emerging markets balance tax benefits, financial flexibility, and operational constraints, offering empirical insight into capital structure dynamics in a rapidly reforming economy.

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