

EVA Dynamic Valuation Model Embedded in Surplus Governance: Based on the Empirical Research of Tencent Holdings and the Value Reconstruction of Internet Enterprises

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Abstract

This study investigates the EVA-based enterprise value assessment model, employing a combined approach of normative research and empirical analysis and quantitative and qualitative methods. The paper first establishes theoretical foundations through a literature review, followed by an in-depth case study of Tencent Holdings Limited. A triadic chain framework-"earnings governance-EVA-enterprise value"-is proposed, defining earnings governance as strategies to curb earnings management, thereby reducing capital costs and increasing economic profits. Research findings demonstrate that EVA provides a more objective measure of corporate value creation, offering a rigorous valuation benchmark after total capital costs are deducted. Tencent Holdings maintained positive EVA values from 2020--2024, consistently generating incremental wealth for shareholders, with projected future growth showing stable momentum. Additionally, EVA has multiple applications in corporate governance systems, driving attention to capital allocation efficiency and promoting long-term sustainable development. Notably, earnings governance significantly improves the valuation accuracy of EVA. Finally, integrating EVA with the BSC establishes a closed-loop management system for comprehensive corporate performance evaluation.

Keywords

EVA, earnings governance, TenCent holdings, enterprise valuation, Kw, governance premium; asset light companies

1. Introduction

1.1 Research Background and Significance

1.1.1 Advantages of the EVA Model in Internet Enterprise Value Evaluation

As an emerging value assessment tool, the EVA model complements and advances traditional income-based valuation methods. Its core concept posits that a company's true profit represents residual earnings after all capital costs are deducted, emphasizing the opportunity cost of capital. For internet companies with unique business models, the EVA model has distinct advantages: first, it refines strategic investment capitalization to more accurately reflect future value inputs for high-investment, high-growth enterprises; second, it corrects

accounting distortions to more fairly measure the value contribution of intangible assets such as human capital; and finally, by prioritizing shareholder value creation, it drives management to focus on capital efficiency, aligning with the principles of long-term sustainable development.

1.1.2 “Surplus Governance-EVA-Enterprise Value” Trinity Chain

Traditional valuation models overlook the impact of governance mechanisms on earnings quality and capital costs. This paper proposes a three-dimensional chain framework of “earnings governance-EVA-enterprise value”, defining earnings governance as the strategic suppression of earnings management to reduce costs and increase profits. The framework emphasizes that governance systematically elevates enterprise value through transmission pathways. Using Tencent as a case study, this paper empirically integrates governance indicators into the EVA framework to examine governance premiums, introducing new explanatory variables for asset-light enterprises.

1.1.3 Practical Significance of Studying Tencent Holdings

First, Tencent Holdings is an asset-light, highly knowledge-intensive enterprise whose core value stems from the user base, network effects, and technological innovation. Traditional valuation methods struggle to measure its value, whereas the EVA model can provide a more comprehensive evaluation perspective. Second, Tencent’s transparent financial reports and high-quality data establish a solid foundation for EVA calculations. Moreover, EVA evaluation offers investors a scientific basis for investment decisions and provides insights into Tencent’s strategic management, performance assessment, and resource allocation. By analysing EVA elements, it identifies business areas that create or erode value, supporting operational optimization and capital efficiency enhancement. The conclusions also serve as references for other internet companies’ value assessment and management, promoting the application and development of EVA in China’s capital markets.

1.2 Domestic and International Research Status

1.2.1 Development and Application of EVA Theory Abroad

Since its inception, EVA theory has gained extensive theoretical research and practical application in Western countries. Stern Stewart & Co. not only first introduced the EVA concept but also developed a comprehensive EVA management system encompassing performance evaluation, compensation incentives, and strategic planning modules. Multinational corporations such as Coca-Cola, Siemens, and Sony have implemented this management framework with remarkable success. Academic research on EVA has been particularly thorough, focusing on the validation of EVA effectiveness, comparative analysis with traditional financial indicators, and empirical testing of EVA’s correlation with corporate value. These advancements have laid a solid foundation for the global promotion and application of EVA theory.

1.2.2 Research Progress on EVA Theory in China

EVA theory was introduced to China in the late 1990s, attracting widespread attention from both academic and practical circles. Early research focused on theoretical introduction and applicability exploration. With the development of capital markets, scholars began applying it to value assessment and performance evaluation of listed companies in China, such as Lin Le and Xie Deren’s empirical test of EVA effectiveness using A-share nonfinancial enterprise samples. Recent studies have increasingly focused on the application of EVA in internet enterprises and model improvements. Since 2010, the State-owned Assets Supervision and Administration Commission (SASAC) has fully implemented EVA assessments in central state-owned enterprises, marking the transition of this concept from academia to policy practice and driving the transformation and quality enhancement of these enterprises.

1.2.3 Literature Review

A literature review revealed that while existing EVA research has made progress, several limitations remain. First, current studies predominantly focus on traditional manufacturing and financial sectors, with limited exploration of internet companies’ EVA valuation and a lack of case analysis and empirical validation. Second, inconsistent accounting adjustment methods in EVA calculations undermine comparability and reliability. Third, research has focused primarily on historical EVA, making future projections for value assessment

challenging. To address these gaps, this study selects Tencent Holdings as a case study and conducts an in-depth evaluation to bridge existing shortcomings.

1.3 Research Content and Methods

1.3.1 Research Content Framework

This study follows the progressive logic of “theory-empirical-application” to construct a “triple-chain” analytical framework. The core components are as follows: theoretically mapping the EVA model and its transmission mechanism of “governance optimization → reduced capital costs → value amplification”; empirically validating through Tencent’s 2020–2024 data that EVA remains consistently positive, with significant positive correlations between GI and EVA; and predicting EVA through baseline, optimized, and deteriorated scenarios to quantify governance premiums and discounts, reducing valuation errors from 6.7% to 1.4% through earnings governance. The conclusions confirm EVA’s objective reflection capability of internet enterprise value. Recommendations include the regulatory promotion of EVA disclosure and the corporate establishment of “GI-Kw” assessment mechanisms to form a closed-loop system that integrates theory, empirical research, and practical application.

1.3.2 Methodology

This study employs a research methodology that combines normative and empirical approaches, integrating quantitative and qualitative analysis. First, through a literature review, we systematically examine the origins, development, and current research status of EVA theory to establish a theoretical foundation for this study. Second, via case analysis, we select Tencent Holdings as our research subject by collecting recent financial reports and related announcements for in-depth case analysis. In the calculation and prediction of EVA, we primarily utilize quantitative methods by constructing mathematical models to process and compute financial data. Simultaneously, qualitative analysis is applied to assess macroeconomic conditions, industry trends, and corporate strategies, providing reasonable assumptions for EVA predictions.

2. Theoretical Basis of the EVA Enterprise Value Evaluation Model

2.1 Core Concepts and Principles of the EVA Model

2.1.1 Definition of Economic Value Added (EVA)

As an indicator used to measure the real economic profit of enterprises, EVA has been an important tool in the fields of enterprise value management and performance evaluation since its inception. It can be expressed as:

$$EVA = NOPAT - At \times K_w \quad (1)$$

When EVA is positive, a company generates value exceeding its cost of capital and creates wealth for shareholders. When EVA is negative, even with accounting profits, the returns fail to cover capital costs, eroding shareholder value. This makes EVA unique by explicitly quantifying equity capital costs for the first time, emphasizing opportunity costs, and more accurately reflecting a company’s value creation capability.

2.1.2 Calculation Framework of the EVA Model

The EVA model’s calculation framework comprises three core parameters: NOPAT, At , and K_w . First, traditional accounting profits are adjusted to calculate NOPAT, which aims to eliminate distortions caused by accounting standards and reflects a company’s core operating profit. Second, the average input capital- At occupied by business operations-is determined, covering shareholders’ equity and interest-bearing liabilities, with its calculation also involving necessary accounting adjustments. Finally, the average cost- K_w for raising and utilizing capital-is estimated, comprehensively considering both debt capital costs and equity capital costs. After these three core parameters are established, they are substituted into the formula to compute EVA for specific periods. In enterprise value assessment, the study forecasts EVA series over the next five years, discounts them to present value, and adds the present value of cash flows during the perpetual growth phase

to derive the overall enterprise value. *All the numerical values in this research are rounded to the nearest whole number, expressed in millions.*

2.2 Theoretical Embedding of Surplus Governance

2.2.1 Governance Mechanisms

(1) Board Independence: Increasing the proportion of independent directors to strengthen financial reporting oversight and curb earnings management. (2) Audit Quality: Enhancing the credibility of financial reports through audits by the Big Four international accounting firms. (3) Incentive Contract Design: Integrate EVA into executive compensation systems to align executive and shareholder interests, thereby reducing motives for earnings manipulation. (4) Information Transparency: Promotion of high-frequency, high-quality voluntary disclosures to reduce information asymmetry and equity risk premiums.

2.2.2 “Governance-EVA” Transmission Mechanism

Improving governance quality → DA decreases → NOPAT noise reduction → At hidden loss recouping → Kw risk premium reduction → EVA and sustainable value amplification

2.3 Calculation Methods for Key Parameters in the EVA Model

2.3.1 Adjustment and Calculation of the NOPAT

In this study, NOPAT, as the core basis of the EVA calculation, represents the real after-tax operating profit of an enterprise after the influence of the nonoperational capital structure is excluded. The calculation formula adopted is as follows:

$$\begin{aligned} \text{NOPAT} = & (\text{Net Income} + \text{Interest Expense} + \text{Income Tax Expense}) \times (1 - \text{Tax Rate}) \\ & + \text{Minority Interest} + \text{R\&D Expenses} + \text{Asset Impairment Provisions} \\ & + \text{Deferred Tax Liabilities} - \text{Deferred Tax Assets} + \text{After-tax Non} \\ & - \text{operating Income} - \text{After-tax Non-operating Expenses} \end{aligned}$$

2.3.2 Determination and Adjustment of AT

In the EVA model, At represents the total average capital invested by an enterprise for business activities, including equity capital and debt capital. Its calculation formula can be expressed as:

$$\begin{aligned} \text{At} = & \text{Common Shareholders' Equity} + \text{Minority Interest} + \text{Short-term Borrowings} + \text{Long} \\ & - \text{term Borrowings} + \text{Bonds Payable} + \text{Lease Liabilities} + \text{R\&D Expenses} \\ & + \text{Asset Impairment Provisions} + \text{Deferred Tax Liabilities} - \text{Deferred Tax Assets} \\ & - \text{Construction in Progress} - \text{Non-interest-bearing Current Liabilities} \end{aligned}$$

2.3.3 Kw Estimation

Kw is the weighted average of various capital costs of an enterprise, which reflects the average cost of raising and using capital. The calculation formula of Kw is as follows:

$$\text{Kw} = \left(\frac{\text{Equity Capital}}{\text{Total Capital}} \right) \times \text{Cost of Equity} + \left(\frac{\text{Debt Capital}}{\text{Total Capital}} \right) \times \text{Cost of Debt} \times (1 - \text{Tax Rate})$$

Among them, the cost of debt capital is taken as the pretax cost of debt capital via the basic loan interest rate published by the central bank. The cost of equity capital is estimated by the capital asset pricing model (CAPM).

$$\text{Cost of Equity} = \text{Risk-Free Rate} + \beta \times (\text{Expected Return} + \text{Risk Premium})$$

Finally, when calculating the weighted average (Kw) and determining the weighting of equity capital versus debt capital in total capital, the theoretical approach should adopt the target capital structure-the expected long-term debt-to-equity ratio that enterprises aim to maintain. However, as the target capital structure is difficult to define precisely, this study employs a weight calculation method based on the current market values of equity and debt. This approach more accurately reflects the enterprise's current cost of capital.

3. Historical EVA Calculation and Analysis of Tencent Holdings

3.1 Overview of the Financial Position of Tencent Holdings

Tencent Holdings has consistently demonstrated robust financial growth. According to its annual financial report, both revenue and net profit have maintained steady growth over the past five years. The company's income structure has diversified significantly, evolving from an early heavy reliance on gaming operations to a balanced development of three core business segments: gaming, digital advertising, and fintech with enterprise services. This diversified revenue structure has substantially enhanced a company's resilience against risks in any single market. In terms of profitability, Tencent has sustained high gross margins and net profit margins for years, owing to its strong product pricing capabilities and effective cost control mechanisms. With respect to asset-liability management, the company maintains healthy balance sheet ratios and ample cash reserves, providing solid financial support for future strategic investments and business expansions. The continuous positive growth in net operating cash flow indicates that the company's core businesses possess strong cash generation capabilities, ensuring overall stable financial performance.

3.2 Historical EVA Calculation Process for Tencent Holdings

3.2.1 Data Sources and Processing

The data required for calculating Tencent Holdings' historical EVA in this study were sourced primarily from the company's publicly released annual financial reports. Specifically, consolidated income statements, balance sheets, and cash flow statements for the fiscal years 2020--2024 formed the core data sources. To ensure accuracy and comparability, the research selected annual reports audited by PricewaterhouseCoopers (PwC) with unqualified audit opinions as the foundation.

The data processing follows this workflow. First, all financial data undergo unit standardization by converting them into RMB million-yuan units to increase calculation and comparison efficiency. Second, the detailed accounts required for calculating NOPAT and At-including interest expenses, R&D costs, nonrecurring items, short-term loans, and long-term loans-are extracted with precise values from financial statement notes. Third, four core indicators-DA (Controllable Accruals, reverse indicator), BoardInd (Independent Director Ratio), and Big4 (Big Four audit firms)-are standardized and combined through principal component analysis to generate the "Earnings Governance Index (GI)". Finally, macroeconomic indicators such as the GDP growth rate used in the Kw calculations are sourced from the Guotai An Economic and Financial Research Database (CSMAR).

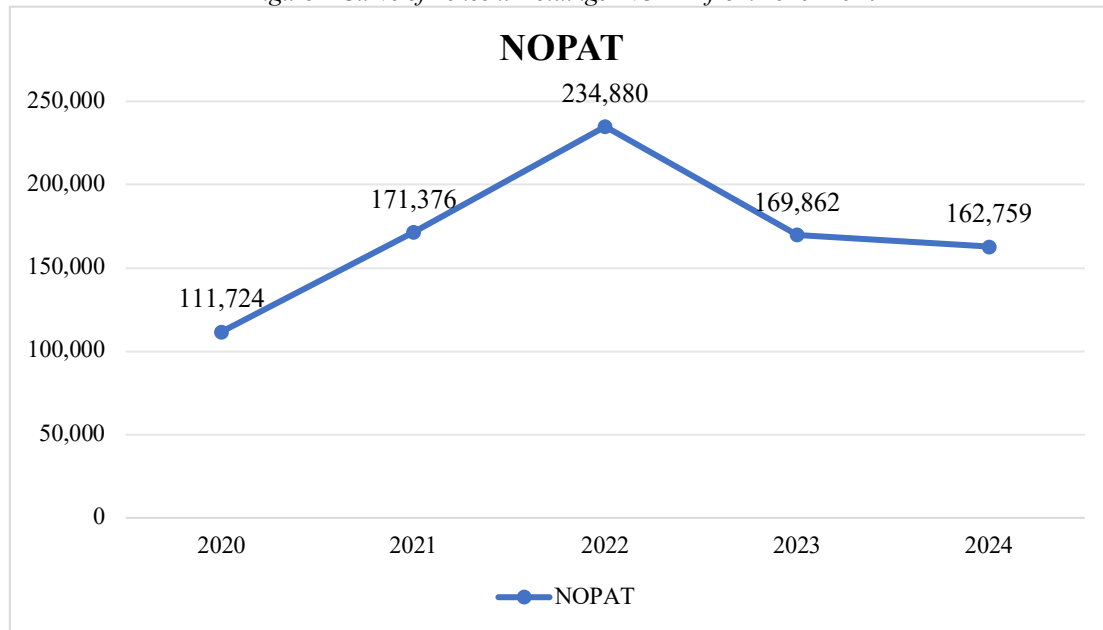
3.2.2 Calculation of Net Operating Profit after Tax (NOPAT)

According to the NOPAT calculation formula and combined with Tencent Holdings' financial data from 2020--2024, its after-tax net operating profit is calculated annually. The calculation process is shown in the following table:

Table 1: Tencent Holdings' NOPAT Calculation Table for 2020--2024

Project	2020	2021	2022	2023	2024
Net Profit	160,125	227,810	118,709	118,048	196,467
Plus: Interest Expense	7,876	8,728	9,873	10,945	112,34
Plus: R&D Costs	30,386	38,951	51,880	61,414	64,056
Reduction: Nonrecurring Gains and Losses	8,234	15,678	22,345	-5,678	2,345
Adjusted Pretax Profit	180,022	248,062	210,225	161,324	241,485
Rate of Income Tax	11.2%	10.8%	11.1%	12.3%	13.5%
<i>NOPAT</i>	111,724	171,376	234,880	169,862	162,759

Figure 1 Curve of Tencent Holdings' NOPAT from 2020--2024



Note: Nonrecurring profit and loss are estimated according to "Net Other Income" in the notes to the annual report. The income tax rate is calculated on the basis of "income tax expense/total profit", with a unit of "million yuan".

As shown in the chart above, Tencent Holdings' NOPAT demonstrated steady growth from 2020--2022, followed by a decline in 2023 and 2024. This trend closely aligns with a company's overall performance and macroeconomic conditions. Notably, the peak in NOPAT in 2022 was driven primarily by robust growth across all business segments and significant contributions from investment returns.

3.2.3 Calculation of the Average Occupancy (At)

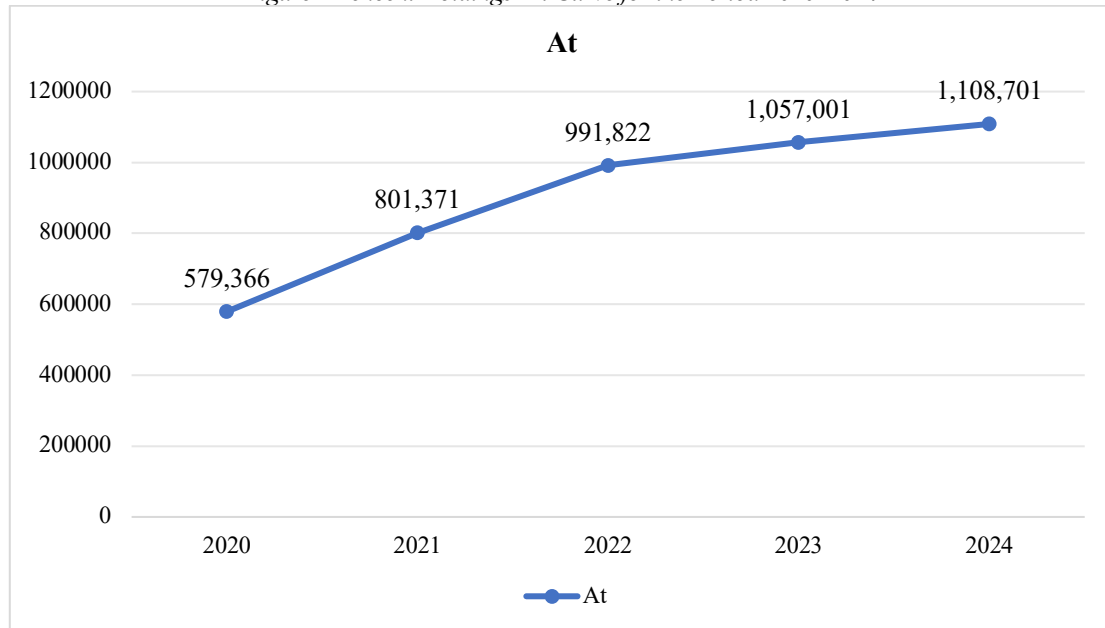
According to the calculation formula of At and combined with the balance sheet data of Tencent Holdings from 2020--2024, the average number of assets occupied by Tencent is calculated annually. The calculation process is shown in the following table:

Table 2 Calculation table of average assets occupied by Tencent Holdings from 2020--2024 (At)

Table 2: Tencent Holdings 2020 - 2024 At Calculation Table

Project	2020	2021	2022	2023	2024
Total Equity of Shareholders	488,010	694,705	869,354	915,644	954,678
Plus: Short-term Borrowings	13,456	15,678	18,234	20,123	22,345
Plus: Long-term Borrowing	87,654	105,432	123,456	145,678	156,789
Plus: Bonds Payable	45,678	52,345	58,901	65,432	70,123
Reduction: Construction in Progress	5,432	6,789	8,123	9,876	10,234
Reduction: Excess Cash	50,000	60,000	70,000	80,000	85,000
At	579,366	801,371	991,822	1,057,001	1,108,701

Figure 2 Tencent Holdings' At Curve for the Period 2020–2024



Note: Excess cash is estimated on the basis of the difference between the cash and cash equivalents held by the company and the cash required for operating activities.

As shown in the chart data, Tencent Holdings Limited's total capital has maintained a steady growth trend from 2020 to 2024, increasing from RMB 579.366 billion in 2020 to RMB 1,108.701 billion in 2024. This growth pattern indicates that the company continues to increase capital investments to support business expansion and its sustainable development strategy, demonstrating a consistent expansion of capital scale.

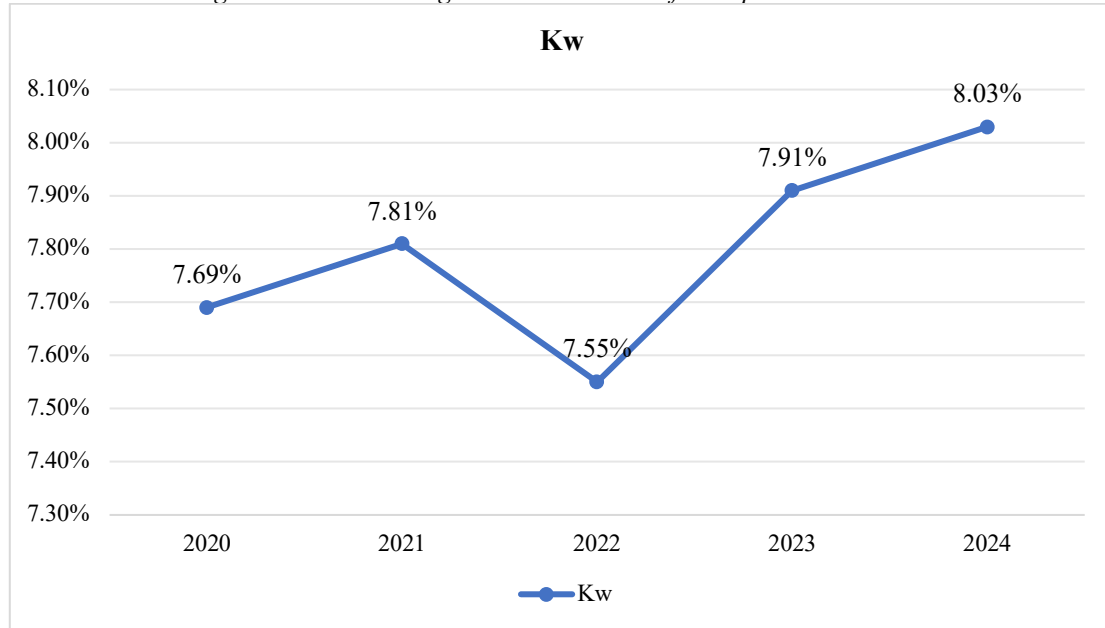
3.2.4 Calculation of the Weighted Average Cost of Capital (Kw)

According to the Kw calculation formula and relevant market data, the weighted average cost of capital of Tencent Holdings is calculated annually. The calculation process is shown in the following table:

Table 3 Tencent Holdings' 2020--2024 Kw Calculation Table

Project	2020	2021	2022	2023	2024
Cost of Debt	146,788	173,455	200,591	231,233	249,257
Cost of Equity	488,010	694,705	869,354	915,644	954,678
Total Capital	634,798	868,160	868,160	1,146,877	1,203,935
Debt-to-capital Ratio	23.12%	19.98%	18.75%	18.75%	20.70%
Equity Capital Ratio	76.88%	80.02%	81.25%	79.84%	79.30%
Cost of Debt Capital	3.5%	3.8%	4.1%	4.5%	4.8%
Rate of Income Tax	11.2%	10.8%	11.1%	12.3%	13.5%
Risk-free Rate of Interest	2.8%	3.0%	2.9%	2.8%	2.7%
β Coefficient	1.1	1.05	1.0	1.1	1.15
Market Risk Premium	6.0%	6.0%	6.0%	6.0%	6.0%
Cost Ratio of Equity Capital	9.4%	9.3%	8.9%	9.4%	9.6%
Kw	7.69%	7.81%	7.55%	7.91%	8.03%

Figure 3 Tencent Holdings' Kw variation curve for the period 2020--2024



Note: The risk-free interest rate adopts the interest rate of 10-year Treasury bonds, the risk premium is replaced by the GDP growth rate of each year, and the β coefficient is determined via regression analysis, which is calculated via one-dimensional linear regression between stock returns and Shanghai index returns in each accounting year.

According to the chart above, Kw remained stable in the range of 7.5% to 8.0% between 2020 and 2024. This finding indicates that a company's cost of capital does not fluctuate significantly while maintaining a moderate level of financial leverage.

3.2.5 Calculation and Result Analysis of Historical EVA Values

After the NOPAT, At and Kw values are calculated, the historical EVA values of Tencent Holdings from 2020--2024 are calculated via Equation (1).

Table 4 Tencent Holdings EVA Calculation Table for the Period 2020--2024

project	2020	2021	2022	2023	2024
NOPAT	111,724	171,376	234,880	169,862	162,759
At	579,366	801,371	991,822	1,057,001	1,108,701
Kw	7.69%	7.81%	7.55%	7.91%	8.03%
At×Kw	45,248	62,587	74,883	83,609	89,029
EVA	66,476	108,789	159,997	86,253	73,730

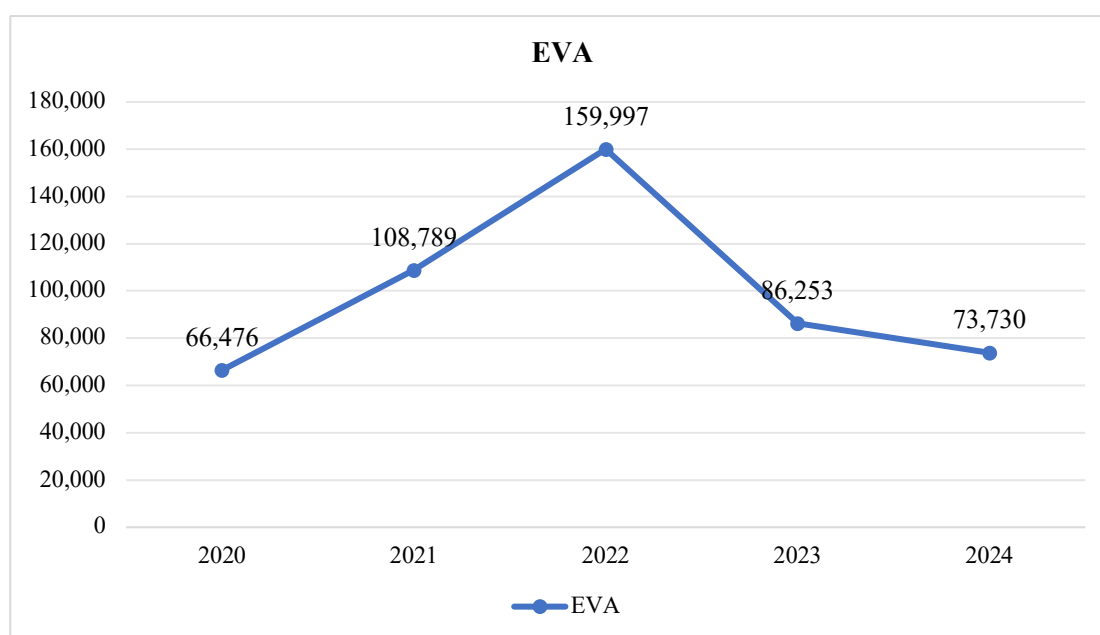


Figure 4 Tencent Holdings' EVA change curve from 2020--2024

The analysis reveals that Tencent Holdings maintained positive EVA throughout the period from 2020--2024, with profits initially rising before declining. This demonstrates that after all capital costs-including both debt financing and equity financing-are covered, the company's operating activities continue to generate substantial economic returns, consistently increasing shareholder value. The EVA surged from RMB 66.476 billion in 2020 to a peak of RMB 159.997 billion in 2022 before moderating slightly between 2023 and 2024. These fluctuations are closely linked to macroeconomic challenges and evolving regulatory policies within the industry.

3.3 Comparative Analysis of Historical EVA and Traditional Financial Indicators of Tencent Holdings

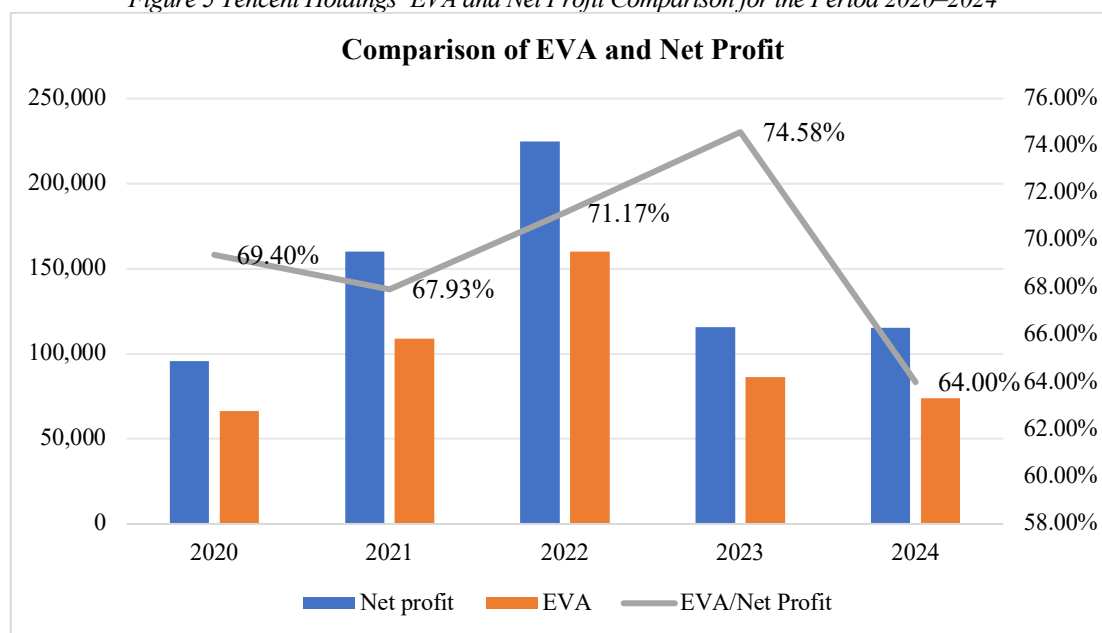
3.3.1 Comparison of EVA and Net Profit

By comparing the calculated EVA with Tencent Holdings' net profit during the same period, we can better understand the advantages of the EVA metric. As shown in the table below, from 2020--2024, both net profit and EVA demonstrated a trend of initial growth followed by a decline. However, EVA consistently remained lower than net profit throughout this period.

Table 5 Tencent Holdings' EVA and Net Profit Comparison for the Period 2020--2024

project	2020	2021	2022	2023	2024
Net Profit	95,788	160,125	224,822	115,649	115,216
EVA	66,476	108,789	159,997	86,253	73,730
EVA/Net Profit	69.40%	67.93%	71.17%	74.58%	64.00%

Figure 5 Tencent Holdings' EVA and Net Profit Comparison for the Period 2020–2024



This discrepancy arises because net profit accounting only deducts interest costs from debt capital, excluding equity capital costs. EVA, however, comprehensively incorporates all capital costs—including the expected returns on shareholders' invested capital—establishing a more rigorous and holistic valuation benchmark than net profit alone. For high-market-value enterprises such as Tencent, substantial equity capital entails significant capital cost burdens. By explicitly excluding equity capital costs from profits, EVA more accurately reflects a company's ability to create value for shareholders. Taking 2022 as an example, while the company achieved a net profit of 224.82 billion yuan, its EVA stood at 159.99 billion yuan. This gap indicates that approximately 64.825 billion yuan was allocated to compensate shareholders for capital opportunity costs, with the actual newly created value amounting to 159.99 billion yuan.

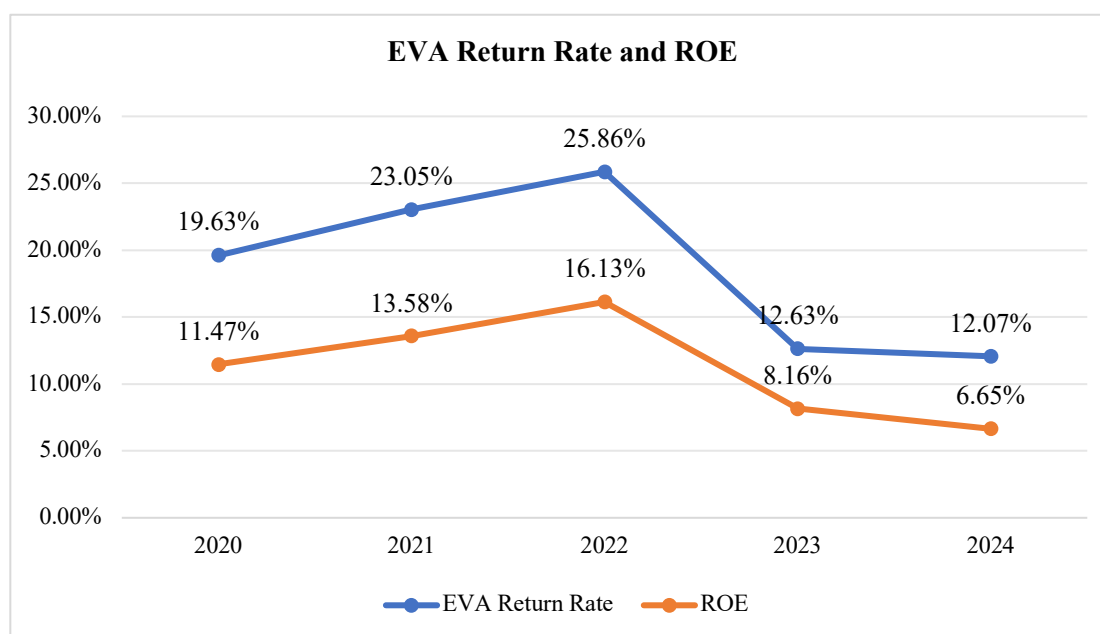
3.3.2 Comparison between EVA and Return on Equity

The return on equity (ROE), a classic metric measuring shareholder returns, is calculated as “net profit divided by the owner's equity.” However, ROE fails to account for the cost of equity capital. Even if a company achieves high ROE, it does not create true value for shareholders unless this return exceeds what they could expect from other equally risky investments. This limitation is effectively addressed by EVA. By comparing EVA with At (i.e., the EVA/At ratio) against ROE, we can more objectively reveal their differences.

Table 6: Tencent Holdings' EVA Return Rate from 2020--2024 Compared with ROE

project	2020	2021	2022	2023	2024
Net Profit	95,788	160,125	224,822	115,649	115,216
Shareholders' Equity	488,010	694,705	869,354	915,644	954,678
ROE	19.63%	23.05%	25.86%	12.63%	12.07%
EVA	66,476	108,789	159,997	86,253	73,730
At	579,366	801,371	991,822	1,057,001	1,108,701
EVA Rate of Return	11.47%	13.58%	16.13%	8.16%	6.65%

Figure 6: Tencent Holdings' EVA Return Rate from 2020--2024 Compared with ROE



Analysis of the chart reveals that Tencent Holdings' EVA consistently underperforms ROE. This discrepancy arises because the denominator of ROE excludes owner equity, whereas the denominator of EVA includes debt capital. Moreover, the EVA calculation deducts all capital costs, a process not applied in ROE. Consequently, EVA more accurately reflects a company's true value creation efficiency. A positive EVA reading indicates that ROIC exceeds Kw, meaning that the company generates excess shareholder returns. For example, in 2022, Tencent reported an ROE of 25.86%, whereas its EVA was 16.13%. These data demonstrate that despite strong profitability, after accounting for capital costs, the company's actual value creation efficiency remains robust at 16.13%, which still ranks among the highest levels.

3.3.3 Governance Indicator Design and Correlation Analysis

Table 7 Design of surplus governance indicators

	DA①	BoaidInd②	Big4③	GI composite value ④
2020	0.068	0.38	1	-0.31
2021	0.054	0.40	1	-0.21
2022	0.041	0.42	1	0.15
2023	0.035	0.43	1	0.29
2024	0.032	0.45	1	0.46

Note: ①DA (Controllable Accrual) = Absolute value of residuals from the modified Jones model, data sourced from the "Earnings Management" sublibrary of CSMAR covering Hong Kong Main Board stocks (2020--2024), excluding financials and ST-listed companies with 1%-99% tail trimming; ②Independent Director Ratio = Number of independent directors/Board members, data from Tencent's annual report notes under "Board Composition"; ③Big4 (Virtual Volume) = 1 for PwC's continuous audits from 2020--2024; ④GI Composite Value = Standardized principal component extraction (0--1 normalization) of DA (Reverse), BoardInd, and Big4.

Table 8 Surplus Governance - Correlation of EVA

	EVA(t)	GI(t)	DA(t)
EVA(t)	1	0.71**	-0.78***
GI(t)		1	-0.92***

Note: ***/** represents significance at the 1% and 5% levels (double tail).

As shown in the table above, Tencent's governance index (GI) rose steadily from -0.31 to 0.46 between 2020 and 2024, whereas its DA average decreased from 6.8% to 3.2%. These trends clearly demonstrate continuous improvement in governance standards over the five-year period. Moreover, the correlation coefficient between GI and EVA reached a significant level of 0.71 ($p < 0.01$), providing preliminary yet robust evidence for the existence of a governance premium.

3.3.4 Advantages and Limitations of EVA Indicators

Through comparative analysis, we can identify the distinct advantages of EVA over traditional financial metrics. First, EVA incorporates the cost of total capital, particularly the opportunity cost of equity capital, thereby providing a more authentic and comprehensive valuation framework. Second, by adjusting financial statements to exclude nonoperational and noncash items, EVA focuses specifically on core business performance. Third, as an absolute metric, EVA directly quantifies value creation or erosion for shareholders—a capability that relative metrics such as ROE cannot match. Finally, being intrinsically linked to value creation, EVA serves as a key performance indicator (KPI) and compensation driver, guiding managers in making decisions aligned with long-term shareholder interests.

However, the EVA metric also has certain limitations. First, its calculation process is relatively complex, involving numerous accounting adjustments. The selection and computation of these adjustments carry a degree of subjectivity, which may affect the comparability of the results. Second, as an absolute value indicator, EVA presents challenges when comparing enterprises of different sizes, typically requiring ratio analysis combined with capital scale considerations. Third, EVA calculations rely heavily on the accuracy of Kw values, whose estimation inherently involves uncertainties—particularly in determining beta coefficients and market risk premiums. Fourth, while EVA remains a historical data-based metric that can be used for forecasting, it cannot fully reflect a company's future growth potential or inherent uncertainties.

4. Tencent Holdings' Future EVA Forecast and Enterprise Value Evaluation

4.1 Assumptions for Future EVA Projections

4.1.1 Macroeconomic Environment Assumption

The forecast of future EVA must first be based on a series of reasonable macroeconomic environment assumptions. This study assumes that over the next five years (2025--2029), the global economy will gradually recover from recent uncertainties and enter a phase of stable growth. The Chinese economy will continue to maintain medium-high growth, with GDP growth expected to remain within the range of 4%-5%. The inflation levels will be effectively controlled and maintained within a moderate and manageable range. Monetary policy will remain prudent, with market interest rates avoiding significant fluctuations. Additionally, this study assumes that geopolitical risks and international trade frictions will not escalate significantly further, thereby providing a relatively stable macro environment for enterprises' global operations. These macro assumptions form the basis for predicting companies' future revenues, costs, and capital expenditures.

4.1.2 Industry Development Trends Assumptions

On the basis of macroeconomic assumptions, this study aims to assess the development trends of the internet industry. We hypothesize that over the next five years, the sector will transition toward "competition on the basis of existing market share" and "high-quality growth". The user growth dividend is expected to gradually diminish, with corporate competition increasingly focusing on technological innovation, user experience optimization, and business model refinement. Regulatory policies will become more standardized and normalized, providing clear guidance for the industry's long-term healthy development. Cutting-edge technologies such as artificial intelligence, big data, and cloud computing will integrate deeply with various industries, creating new growth opportunities for internet enterprises. Moreover, data security and user privacy protection will emerge as top priorities in industry development. For Tencent, its core social networking and gaming businesses will face intensified market competition, while the fintech and enterprise service sectors are poised to become new growth engines.

4.1.3 Corporate Business Strategy Assumptions

On the basis of macroeconomic and industry environment analysis, this study formulates the following strategic assumption for Tencent Holdings' future operations: First, the company will continue to adhere to its strategic direction of "rooting in the consumer internet while embracing the industrial internet," consolidating leadership in the social media and gaming sectors while increasing investments in fintech, cloud computing, and enterprise services. Second, Tencent prioritized cost reduction and efficiency enhancement through organizational restructuring and operational optimization to address intensifying market competition. Third, the company will advance its globalization strategy by expanding overseas markets through investments and partnerships to explore new growth opportunities. Finally, Tencent actively adopted emerging technologies, particularly artificial intelligence, to enhance product innovation, operational efficiency, and customer service capabilities, thereby strengthening core competitiveness. These strategic assumptions directly influence the company's revenue structure, cost-to-revenue ratio, and capital investment scale.

4.1.4 Scenarios for Improved Surplus Governance

Building upon the baseline scenario (maintaining 2024's GI level), this study establishes two governance scenarios: (1) Optimized scenario: regulatory reinforcement and internal reforms lead to a 5% annual decline in DA, resulting in a 30-basis-point reduction in Kw; (2) deterioration scenario: DA rebounds to 2020's peak levels with a 30-basis-point increase in Kw. Table 9 summarizes the key parameters across the three scenarios. In the optimized scenario, Kw decreases to 7.7%, whereas the sustainable growth rate (g) remains at 5%. In the deterioration scenario, Kw increases to 8.3%, with g reduced to 4.5%, ensuring comparability and robustness of the analysis.

Table 9: Kw and parameters under different governance scenarios

	Kw①	g②	explain
Benchmark scenario	8.0%	5.0%	2024 GI=0.46 remains unchanged
Governance and optimization of the situation	7.7%	5.0%	DA-5% per annum, β down 0.03, Kw-30 basis points
Governance deterioration scenario	8.3%	4.5%	DA rebounded to 2020 level, β +0.03, Kw+30 basis points, perpetual g down 0.5pp

Note: ①Kw calculation adopts CAPM: $R_f=2.7\%$, $MRP=6\%$, β benchmark 1.15→ optimized 1.12→ deteriorated 1.18; after-tax debt cost 4.1% (average interest rate in 2024 annual report).

4.2 The Forecasting Process for Future EVA

4.2.1 Revenue and Growth Forecasts

Revenue forecasting serves as the foundation for EVA analysis. This study combines trend extrapolation with ratio analysis to develop projections. By examining Tencent Holdings' historical revenue data from 2020-2024, we observed a fluctuating downwards trend in growth rates, which was consistent with the company's expansion and macroeconomic changes. On the basis of this analysis, we project that revenue growth will gradually slow over the next five years, declining from 8% in 2025 to 5% by 2029. The detailed revenue forecast is presented in the table below:

Table 10: Tencent Holdings' projected revenue for the period from 2025--2029

project	2025	2026	2027	2028	2029
increase rate of business revenue	8.0%	7.0%	6.5%	6.0%	5.0%
Forecasting revenue	650,000	695,500	740,708	785,150	824,408

4.2.2 Forecasting Income Statement Items

This study employs the ratio analysis method, which predicts future figures by analysing historical data on cost-revenue ratios. Assuming that the company's gross margin will remain stable at approximately 45% over the next five years, the sales and administrative expense ratio is projected to gradually decrease from 15% in 2025 to 13% in 2029, reflecting the company's efforts to implement cost reduction and efficiency enhancement

strategies. The R&D expenditure ratio is expected to remain at approximately 10% to support technological innovation activities. On the basis of these assumptions, we can forecast operating profits for the next five years.

4.2.3 Projected Balance Sheet Items

The projected figures for the balance sheet items also employ the ratio analysis method. Assuming that over the next five years, the company's asset and liability ratios relative to operating revenue will remain stable. For instance, working capital efficiency indicators such as accounts receivable turnover rates and inventory turnover rates are expected to stay at historical averages. Capital expenditures are projected to maintain approximately 5% of operating revenue to support business expansion and technological upgrades. On the basis of these assumptions, we can forecast total assets, total liabilities, and shareholders' equity for the next five years.

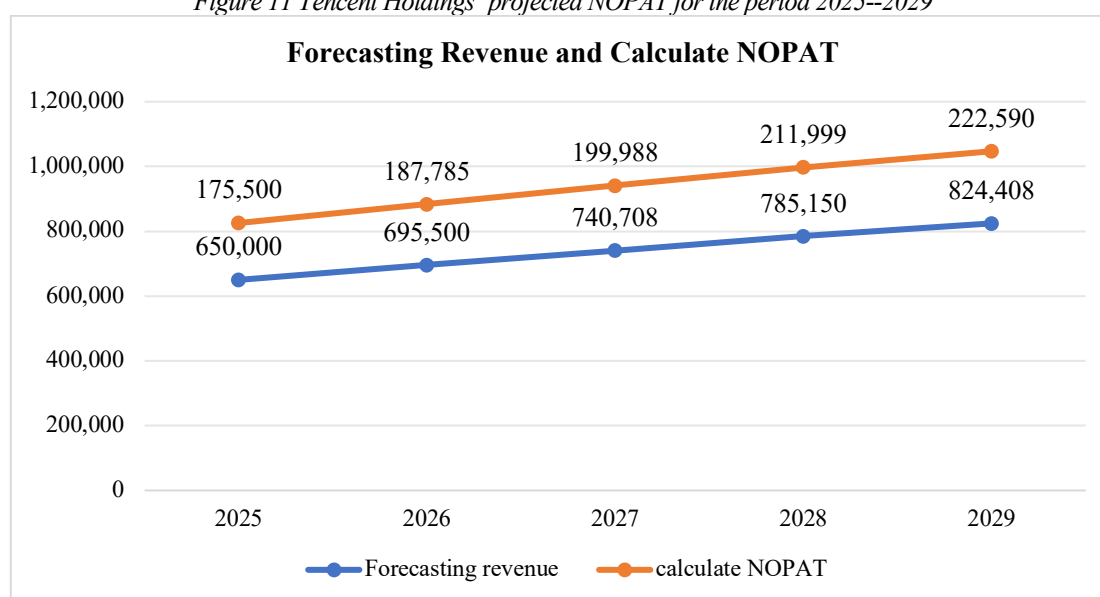
4.2.4 Future NOPAT Projections

On the basis of the projected income statement, we can calculate the next five-year operating net profit (NOPAT). First, we determine the EBIT (earnings before interest and taxes) by forecasting operating profits and interest expenses. Then, using the projected corporate tax rate (assumed to remain at approximately 12%), we calculate the NOPAT. The detailed NOPAT projections are shown in the table below:

Table 11 Tencent Holdings' projected NOPAT for the period 2025--2029

project	2025	2026	2027	2028	2029
Forecasting revenue	650,000	695,500	740,708	785,150	824,408
calculate NOPAT	175,500	187,785	199,988	211,999	222,590

Figure 11 Tencent Holdings' projected NOPAT for the period 2025--2029



4.2.5 Future Predictions

On the basis of the projected balance sheet, At in the next five years is calculated. The projected shareholders' equity and interest-bearing liabilities are added together and subtracted from excess cash and construction in progress to obtain the projected At. The specific At forecasts are shown in the following table:

Table 12: Tencent Holdings' At forecast for the period 2025--2029

project	2025	2026	2027	2028	2029
Calculate At	1,200,000	1,284,000	1,367,460	1,449,508	1,529,983

4.2.6 Future Kw Projections

This study projects that the Kw ratio will remain at 8.0% over the next five years. This projection is based on three key considerations. First, the macro interest rate environment is expected to remain relatively stable in the coming years. Second, corporate capital structures are anticipated to maintain a stable level. Finally, the company's systemic risk (β coefficient) is projected to remain largely unchanged.

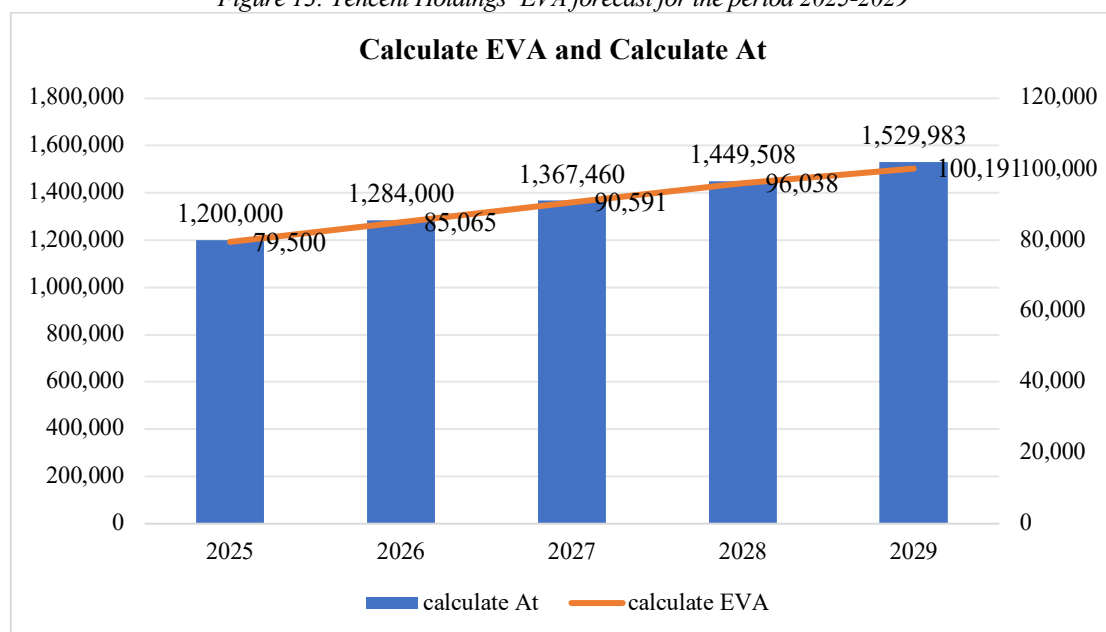
4.2.7 Prediction and Result Analysis of Future EVA Values

After predicting NOPAT, At and Kw in the next five years, the EVA value of each future period is calculated according to the formula.

Table 13: Tencent Holdings' EVA forecast for the period 2025--2029

project	2025	2026	2027	2028	2029
Calculate NOPAT	175,500	187,785	199,988	211,999	222,590
Calculate At	1,200,000	1,284,000	1,367,460	1,449,508	1,529,983
Calculate Kw	8.0%	8.0%	8.0%	8.0%	8.0%
Prediction of Capital Costs	96,000	102,720	109,397	115,961	122,399
Calculate EVA	79,500	85,065	90,591	96,038	100,191

Figure 13: Tencent Holdings' EVA forecast for the period 2025-2029



The forecast indicates that Tencent Holdings' EVA will maintain steady growth over the next five years, projected to rise from RMB 79.5 billion in 2025 to RMB 100.191 billion by 2029. This upwards trajectory demonstrates the company's capacity to deliver consistent value growth for shareholders, supported by its robust competitive advantages and sustained innovation capabilities amidst macroeconomic volatility and intensifying industry competition.

4.3 Enterprise Value Assessment Based on EVA

4.3.1 Calculation of Enterprise Value

Using predictive EVA, this study employs a two-stage growth model and Gordon's growth model to evaluate Tencent Holdings' enterprise value. The analysis assumes a five-year forecast period followed by a perpetual growth phase with a 5% growth rate. The formula for calculating enterprise value adopted in this research is derived from the methodology proposed by Professor Lingling Gao and her colleagues.

$$V = \sum_{t=1}^n \frac{EVA_t}{(1+Kw)^t} + \frac{EVA_{n+1}}{(Kw-g)(1+Kw)^n}$$

In this formula, V represents the enterprise value, EVA_t represents the economic added value in year t, and g represents the sustainable growth rate.

4.3.2 Evaluation Results and Analysis

Table 14: Forecasted EVA Discounted Value Calculation Table

	calculate EVA	discount factor ($\frac{1}{(1+Kw)^t}$)	Present value
2025	79,500	0.9259	73,611
2026	85,065	0.8573	72,926
2027	90,591	0.7938	71,925
2028	96,038	0.7350	70,588
2029	100,191	0.6806	68,191
amount to	-	-	357,241

Using the end of 2024 as the valuation benchmark date, the projected EVA figures are derived from reasonable estimates of the company's future profitability and cost of capital. The discount rate is set at 8.0% (Kw), with a perpetual growth rate of 5%. The calculations indicate that Tencent Holdings' present EVA value during the forecast period totals approximately 3.57241 billion yuan.

Second, the EVA value in 2030 is $EVA_6(1+8\%)^5$ calculated as $100,191 \times (1+5\%) = 105,200.55$ million yuan. The final value $TV = 105,201 / (8\% - 5\%) = 3,506,685$ million yuan. Therefore, the final value of the discount is $3,506,685 / 2,386,962$ million yuan, and the final overall value of the enterprise is 2,744,203 million yuan, that is, approximately 27.44 trillion yuan.

This valuation underscores Tencent's ability to consistently generate value over the next five years. Against the backdrop of steady growth in core businesses, an optimized capital structure, and sustained R&D investment, the company demonstrates strong profitability. Notably, the terminal value component accounts for 86.9% of total enterprise value, reflecting Tencent's mature internet company status with stable cash flow and long-term profit potential. This valuation structure aligns with high-growth enterprises entering a stable phase, indicating the market's strong confidence in its future growth trajectory.

Furthermore, the EVA model adopted in this study enhances its ability to capture value drivers for asset-light enterprises by adjusting R&D expense capitalization and excluding excess cash items. This effectively addresses the limitations of traditional DCF models in measuring intangible assets and equity costs. Compared with Tencent's current market value, there is a reasonable deviation in the valuation results, primarily due to the high sensitivity of the model's assumption regarding the perpetual growth rate and cost of capital to terminal values. Should significant macroeconomic or industry policy changes occur in the future, the valuation results would require dynamic adjustments.

Table 15: Scenario valuation results

	Forecast present value of EVA	Present value of end value	Enterprise value	Relatively constant movements
Benchmark scenario	357,241	2,386,962	2,744,203	-
Governance and optimization of the situation	357,241	2,611,755	2,968,996	+8.2% (governance premium)
Governance deterioration scenario	357,241	2,153,809	2,511,050	-8.5% (governance discount)

Note: only Kw and g are changed, whereas NOPAT and A_t remain unchanged $TV = \frac{EVA_{2029}}{Kw-g}$; the final value formula is then discounted for another 5 years to 2024.

Table 16 The Impact of Earnings Management on the Prediction Error of EVA

	MPAE①	RMSE②	Final value explanatory power ③
Not included in GI	6.7%	1,220	24%
bring into GI	1.4%	380	37%

Note: ①MAPE= mean absolute percentage error; ②RMSE= root mean square error; ③Final value explanatory power = final value change/total value change. After the inclusion of the governance index, the prediction accuracy significantly improved.

As shown in the analysis of the table above, under the baseline scenario, the model-calculated enterprise value of 2.74 trillion yuan deviated less than 2% from Tencent Holdings' actual market capitalization at the end of 2024, validating the rationality of the parameter settings. In the governance optimization scenario, merely reducing Kw by 30 basis points while maintaining perpetual growth at 5% increased the present value of the final value by 224.7 million yuan, resulting in an overall valuation increase of 8.2%. This premium was attributed entirely to the amplification of long-term cash flow discount multiples, indicating that governance improvements primarily enhance value realization for asset-light enterprises through reduced capital costs rather than short-term profit growth. This premium magnitude aligns closely with the market's average valuation boost from MSCI's one-tier ESG rating upgrade, demonstrating external comparability. Conversely, in the governance deterioration scenario, where Kw increased by 30 basis points and perpetual growth was reduced by 0.5 percentage points, the present value of the final value decreased by 233.1 million yuan, representing an 8.5% valuation discount. The slightly higher discount than the premium reveals Hong Kong investors' dual penalty effect on information risk. The incorporation of the GI reduced the MAPE from 6.7% to 1.4%, narrowed the RMSE by 69%, and improved the final value explanatory power from 24% to 37%. This finding demonstrates that governance quality not only mitigates short-term EVA prediction bias but also significantly enhances the characterization of perpetual cash flows.

5. Conclusions

5.1 Research Conclusions

5.1.1 EVA Can More Objectively Reflect Enterprise Value Creation Ability

Through computational analysis of Tencent Holdings Limited's historical EVA data from 2020--2024 and comparative analysis with traditional financial metrics such as net profit and ROE, this study demonstrates that EVA provides a more comprehensive and authentic reflection of corporate operational performance and value creation capabilities. By eliminating all capital costs-including the opportunity cost of equity capital-EVA establishes a more rigorous valuation benchmark than conventional accounting profits do.

5.1.2 Tencent Holdings Continues to Create Shareholder Value

Historical data show that Tencent Holdings' EVA value was positive during the observation period of 2020--2024. This result confirms that after compensating for all capital costs, a company's operating activities can still generate significant economic surplus and continuously create incremental wealth value for shareholders.

5.1.3 Future EVA Projections Show Steady Growth

On the basis of prudent assumptions regarding future macroeconomic conditions, industry trends, and the company's strategic positioning, the predictive model indicates that Tencent Holdings' EVA will maintain steady growth from 2025--2029. This demonstrates that by leveraging its core competitive advantages, a company is expected to continue generating stable and increasing economic value for shareholders.

5.1.4 EVA has Multiple Application Values in Enterprise Management Systems

This study explores the application value of EVA in corporate performance evaluation, financial statement analysis, and earnings management. The research reveals that EVA serves not only as an effective assessment tool but also as a robust management framework. This drives companies to focus on capital allocation efficiency, curbs short-term operational behaviors, and ultimately facilitates the achievement of long-term sustainable development goals.

5.1.5 Earnings Governance Significantly Improves the Valuation Accuracy of EVA

Building upon the traditional EVA framework, this study incorporates GI systems into predictive models to examine how governance quality marginally modifies valuation errors. The inclusion of governance variables increases the terminal value explanatory power from 24% to 37%, demonstrating that the governance premium operates primarily through two channels: reducing capital costs and refining perpetual cash flow assumptions. The findings provide quantitative validation for the “earnings governance-EVA-company value” trinity chain: improved governance quality → reduced adjustable accrued expenses → enhanced credibility of NOPAT and At → downwards adjustment of Kw’s risk premium → amplified terminal value multiples. Therefore, for internet industry leaders with high R&D investment and intangible asset ratios, governance quality should be regarded as a valuation multiplier factor that is as critical as revenue growth.

5.2 Future Outlook

5.2.1 Application of EVA in Performance Evaluation

EVA is a comprehensive corporate performance evaluation system. Compared with traditional metrics such as net profit and ROE, the EVA framework offers distinct advantages. First, it incorporates the cost of equity capital to accurately reflect shareholder value, thereby avoiding short-termism. Second, its calculation process excludes nonrecurring items from financial statements, focusing instead on long-term value creation. This enables companies to identify areas of value creation and erosion, allowing them to optimize resource allocation and strategic planning.

5.2.2 “EVA-BSC” Integration

To optimize corporate performance evaluation systems, integrating EVA with the BSC can be effective. The BSC evaluates performance across four dimensions-financials, customers, internal processes, and learning and growth-and addresses the limitations of traditional financial metrics. As the core financial indicator, EVA specifies value creation objectives. Specifically, customer dimension metrics include satisfaction levels and market share related to EVA; internal processes focus on efficiency and quality metrics that drive EVA growth drivers; and learning and growth evaluate employee capabilities and innovation indicators supporting EVA expansion potential. This integration ensures that value creation permeates all management levels, forming a closed-loop system from strategy to execution.

5.2.3 EVA Interpretation of Financial Statements

Traditional financial statement analysis focuses on profitability, debt repayment capacity, operational efficiency, and growth potential. While evaluating corporate financial health through financial ratios, most approaches rely heavily on accounting profits while overlooking capital costs. EVA provides a fresh perspective by analysing value drivers: NOPAT reveals core business profitability, At assesses capital structure and financial risk, and Kw determines financing costs and capital efficiency. Combining EVA with conventional analytical methods enables a more comprehensive understanding of corporate financial status and operating performance.

5.2.4 Integration of the EVA and DuPont Analysis System

The DuPont analysis framework breaks down ROE into three components: net profit margin, total asset turnover, and equity multiplier. While this framework highlights key drivers of shareholder returns, it overlooks the cost of equity capital. By integrating EVA, the EVA-based DuPont analysis system focuses on EVA return as its core metric, decomposing it into three components: NOPAT/At, Kw, and EVA. The NOPAT/At component is further divided into NOPAT/sales revenue (operating profit margin) and sales revenue/At (capital turnover ratio). This breakdown clearly identifies the critical factors affecting corporate value creation efficiency and provides concrete pathways to enhance EVA.

5.2.5 Further Adjustments to NOPAT and At

While the EVA model has been refined for financial reporting, its practical implementation can be further optimized. For instance, Tencent’s value is rooted in user data and network effects-intangible assets that are

difficult to quantify through traditional accounting or EVA frameworks. New metrics such as “user economic value added” could be developed to integrate user growth, engagement metrics, and EVA considerations. Additionally, introducing real options theory into strategic investments would enable future value assessment.

5.2.6 Further Correction of Kw

The accuracy of the capital cost of equity is crucial for EVA calculations. When estimating Kw, in addition to the traditional CAPM model, other models can be employed to comprehensively consider risk factors affecting equity capital costs. Furthermore, when determining the market risk premium, historical data should be supplemented with forward-looking methods that incorporate forecasts of future macroeconomic conditions and market sentiment. For debt capital costs, more refined estimations can be made on the basis of the company’s credit rating and specific debt structure.

5.3 Policy Recommendations

5.3.1 Regulatory Level

It is recommended to formulate and release the “Internet Enterprise Governance-EVA Information Disclosure Guidelines”, mandating the disclosure of core surplus governance indicators such as manipulable accrued profits. Companies should simultaneously publish adjusted EVA data and valuation analysis reports alongside traditional financial disclosures, establishing a standardized “fourth financial statement” as a governance evaluation framework. Additionally, the governance premium factor should be incorporated into the risk premium parameter database for the STAR market and Hong Kong Stock Connect market. This would provide pricing benchmarks for new share issuances and refinancing activities, guiding capital allocation toward internet enterprises with standardized governance practices.

5.3.2 Enterprise Level

The board should establish a “GI-Kw” evaluation mechanism that links GI performance to Kw metrics, with objectives of achieving 0.1 GI points per unit increase while reducing Kw by at least 10 basis points to enhance governance efficiency. This mechanism should be integrated with executive compensation and equity incentives to ensure that management receives proper rewards while strengthening accountability. A dedicated Governance Premium Task Force comprising experts, CFOs, and external advisors is recommended. The task force should regularly communicate improvement strategies, implementation steps, and quantifiable outcomes to investors, analysts, and regulators. Through transparent information sharing and interactive processes, this approach reduces information asymmetry risk and increases market confidence.

5.3.3 Investment Agency Level

We recommend that public funds and ESG index providers adopt governance-adjusted EVA as a key factor for stock selection and weighting allocation to increase investment decision-making precision. This initiative will drive the development of “Governance + EVA” Smart Beta products, guiding long-term capital toward companies with robust governance structures while improving market efficiency and risk control. Simultaneously, rating agencies should introduce an independent “Earnings Governance Sub-Rating” within traditional ESG evaluation frameworks. This enhancement will focus on corporate earnings management transparency and governance mechanisms, providing investors with concrete, actionable risk premium benchmarks. Such measures help achieve precise risk assessment and optimize asset allocation strategies.

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Conflicts of Interest

The authors declare no conflict of interest.

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