Received: 23 Mar. 2026 | Revised: 24 Mar. 2026 | Accepted: 27 Mar. 2026 | Published online: 31 Mar. 2026

RESEARCH ARTICLE

Contemporary Education and Teaching Research
2026, Vol. 7 (3)100-105
DOI: 10.61360/BoniCETR262019880304

Risk Prevention in Financial Management at Higher Vocational Colleges against the Background of Industry-Education Integration

Jun Li[1,*]
[1]*Wuhan Guanggu Vocational College, P.R. China*

Abstract: The deepening of industry – education integration has rendered school – enterprise collaboration, practical training investment, and funding structures in higher vocational colleges increasingly complex, thereby significantly elevating the difficulty of financial management. Traditional financial management models are often characterized by weak risk awareness and inadequate regulatory mechanisms, which may easily trigger risks related to capital, assets, and operational processes. Consequently, the establishment of a financial risk prevention and control system aligned with industry – education integration has become an urgent priority. Grounded in the practical context of industry – education integration, this study analyzes the major types of financial management risks faced by higher vocational colleges, explores the underlying causes of these risks, and proposes targeted prevention and control strategies. Furthermore, it seeks to construct a comprehensive financial risk management framework to standardize financial operations, safeguard educational funds, facilitate the high-quality implementation of industry – education integration strategies, and promote the sustainable and healthy development of higher vocational institutions.

Keywords: Industry-Education integration, higher vocational colleges, financial management, risk prevention, internal control system

1. Introduction

Against the backdrop of the continuous advancement of policies promoting industry–education integration and school–enterprise cooperation in vocational education, higher vocational colleges have expanded rapidly in scale. Models such as jointly established training bases, cooperative education programs, and collaborative talent cultivation between schools and enterprises have been widely promoted. As a result, financial management activities involving capital circulation, asset operation, and fund accounting have become increasingly complex. Strengthening risk prevention in financial management has thus become a crucial means for maintaining institutional order, improving operational efficiency, and deepening reforms in industry–education integration. These efforts are of substantial practical significance for advancing the high-quality development of vocational education.

2. Characteristics of Financial Management in Higher Vocational Colleges under Industry–Education Integration

With the deepening development of industry education integration and school–enterprise cooperation, financial management in higher vocational colleges has transitioned from a traditional model—primarily reliant on fiscal appropriations and tuition revenue—to a modern governance model characterized by diversified financing, project-based operations, collaborative engagement with enterprises, and performance orientation.

This transformation is reflected in several notable features. First, funding sources have become increasingly diversified. In addition to per-student fiscal allocations and institutional revenues, income streams now include service fees from school–enterprise cooperation, funding from industry–education integration initiatives, joint investments in training bases, corporate donations, and revenues from scientific and technical services. As a result, funding channels have expanded significantly, and the level of financial management refinement and standardization has improved.

Second, fund utilization exhibits clear characteristics of projectization and industrialization. Centered on modern industrial colleges, order-based training programs, practical training bases, master skill studios, and jointly established R&D centers, higher vocational institutions have undertaken

Corresponding Author: Jun Li
Wuhan Guanggu Vocational College, P.R. China

substantial project-based investments. Expenditures are closely integrated with discipline development, practical training, technical services, and social training programs. Financial activities have thus evolved beyond merely supporting teaching functions to deeply intervening in industrial operational processes, significantly increasing the complexity of financial accounting and management (Luo, 2024).

3. Common Financial Management Risks under Industry–Education Integration

3.1 Capital control risks in School–Enterprise cooperation

Capital control risks in school–enterprise cooperation represent one of the most prominent and direct financial risks under industry–education integration. As cooperation models expand from basic internship arrangements and order-based training to deeper collaborations such as jointly established industrial colleges, mixed-ownership education, technical services, and revenue-generating training programs, financial transactions have become increasingly complex.

These transactions involve diverse components, including enterprise investment, profit-sharing arrangements, project management fees, equipment donations, compensation for training materials, and training income settlements. The heterogeneity of funding sources, irregular payment cycles, and inconsistent accounting standards create significant management challenges.

On one hand, ambiguities in cooperation agreements regarding financial rights and responsibilities—such as cost-sharing, revenue distribution, payment schedules, invoicing, and tax liabilities—often lead to frequent settlement disputes and prolonged outstanding accounts receivable (Zhang, 2024). On the other hand, enterprises, as market entities, are exposed to operational risks. Issues such as liquidity constraints, financial losses, or changes in legal representation may result in delayed or unmet financial commitments, thereby directly affecting project implementation and fund security.

3.2 Investment risks in the construction of training bases

As the core carrier of industry–education integration, training bases involve high investment, long construction cycles, rapid equipment updates, fast technological iteration, and volatile industry demand, all of which contribute to significant investment and operational risks.

From a decision-making perspective, insufficient preliminary research, inadequate cost–benefit analysis, and weak feasibility studies may lead institutions to pursue large-scale, high-standard investments without proper justification. This often results in mismatches between equipment and industry needs, outdated technical specifications, low utilization rates, and the accumulation of inefficient or idle assets.

From a financing perspective, training base construction typically relies on a combination of fiscal funds, joint investments, and institutional self-financing. Poor fund allocation, delayed capital inflows, or high financing costs may lead to project delays, unfinished projects, and increased debt pressure (Huang, 2024).

Additionally, deficiencies in procurement management, contract administration, cost control, and acceptance procedures may give rise to inflated budgets, substandard quality, and potential rent-seeking behaviors. Rapid technological obsolescence in fields such as intelligent manufacturing, information technology, healthcare, and finance further accelerates asset depreciation. Combined with inadequate depreciation practices, low asset-sharing rates, and high maintenance costs, these issues may lead to implicit losses of state-owned assets.

Moreover, unclear ownership, usage rights, and maintenance responsibilities in jointly constructed training bases may result in management gaps, asset damage, loss, or redundant procurement, thereby exacerbating investment risks.

3.3 Budget execution deviation risks

With the rapid increase in industry–education integration projects, budget formulation in higher vocational colleges has become significantly more challenging, leading to growing risks of budget execution deviations.

On one hand, the innovative and exploratory nature of many projects makes it difficult to accurately estimate costs during the budgeting stage, often resulting in rough estimates, insufficient justification, and lack of standardized benchmarks. On the other hand, strong uncertainties during execution—such as delayed enterprise funding, policy adjustments, price fluctuations, and project changes—frequently cause discrepancies between budgeted and actual expenditures (Zhang, 2024).

Some institutions exhibit a tendency to prioritize budget formulation over execution, leading to irregular budget adjustments, unauthorized expenditures, overspending, and misappropriation of

earmarked funds. Weak performance target setting and superficial monitoring further result in project delays, idle funds, and inefficient spending. When performance evaluation results are not effectively utilized, budget constraints become weakened, reinforcing execution deviations and undermining financial discipline.

4. Strategies for Financial Risk Prevention in Higher Vocational Colleges under Industry–Education Integration

4.1 Improving the internal financial control system

Establishing a systematic, comprehensive, and operable internal financial control system constitutes the foundational framework for financial risk prevention in higher vocational colleges. In the context of industry–education integration, internal control construction should be oriented around key operational flows, including capital flow, project flow, asset flow, and business flow, while establishing a full-chain governance mechanism encompassing decision-making, approval, implementation, supervision, and accountability.

It is essential to ensure that institutional rules effectively regulate authority, processes, and personnel. Clear delineation of decision-making authority and procedural rules should be established for key areas such as school–enterprise cooperation, training base construction, procurement management, expenditure control, and asset disposal. Collective decision-making, expert consultation, and risk assessment mechanisms should be prioritized to prevent arbitrary or individual decision-making.

Approval processes should be optimized in accordance with the principle of segregation of incompatible duties, ensuring appropriate allocation across budgeting, accounting, payment, auditing, and documentation functions to form a system of mutual checks and balances. Furthermore, targeted management regulations should be developed for critical areas of industry–education integration, including cooperative funds, training base assets, social service income distribution, procurement, and bidding processes, thereby achieving precise and comprehensive institutional coverage (Li, 2024).

In addition, contract management and invoice administration should be strengthened. Standardized contract templates must be adopted in all school–enterprise collaborations, construction projects, and equipment procurement activities, with clear stipulations regarding financial terms, payment conditions, and liability for breach. Financial departments should be deeply involved in contract review processes to mitigate risks at the source.

To enhance operational effectiveness, internal control procedures should be embedded within intelligent financial systems, enabling standardized expenditure controls, traceable approval processes, and automatic detection of anomalies. Regular internal control self-assessments and internal audits should be conducted, with identified issues recorded, rectified within specified timeframes, and continuously tracked to ensure closed-loop management. Through these measures, a robust institutional defense line for financial security can be established.

4.2 Strengthening financial risk control in School–Enterprise cooperation

Given the complexity, diversity of stakeholders, and intertwined interests inherent in school–enterprise cooperation, financial risks must be managed through a comprehensive and penetrating control framework to ensure transparency in funding sources, standardization in expenditures, rationality in returns, and overall financial security.

At the entry stage, strict due diligence procedures should be implemented in the selection of partner enterprises. Key evaluation criteria should include corporate qualifications, creditworthiness, financial strength, and compliance status, thereby restricting the participation of high-risk entities and minimizing potential risks at the outset.

Subsequently, financial clauses in cooperation agreements should be standardized, clearly defining funding modalities, payment schedules, invoicing requirements, tax obligations, cost-sharing arrangements, profit distribution mechanisms, liability for breach, and exit strategies. Such provisions ensure clarity of rights and responsibilities, enforceability, and traceability (Wang, 2025).

Cooperative funds should be managed through designated accounts and subject to separate accounting to guarantee earmarked usage and prevent misappropriation or fictitious expenditures. Payment processes must strictly adhere to a standardized sequence of "agreement-invoice–verification–approval–disbursement," with disbursements linked to project progress, performance outcomes, and acceptance certifications, thereby preventing premature or excessive payments.

For market-oriented revenues such as profit-sharing and training income, cost allocation and accounting procedures should be standardized, and tax compliance must be ensured to avoid irregular profit distribution or unauthorized

appropriation. In parallel, a performance monitoring mechanism for partner enterprises should be established to track fund utilization, project implementation, and operational efficiency. In cases of financial distress, breach of contract, or abnormal operations, early warning mechanisms should be activated, followed by timely renegotiation or termination of cooperation agreements.

Through rigorous entry controls, process supervision, and post-performance evaluation, financial risks in school–enterprise cooperation can be rendered preventable, controllable, and traceable, thereby safeguarding institutional funds and assets.

4.3 Establishing a financial risk early warning system

The development of a digitalized and intelligent financial risk early warning system represents a critical mechanism for achieving early identification, early warning, and early intervention in risk management, effectively shifting from reactive remediation to proactive prevention.

Based on the operational characteristics of industry–education integration, higher vocational colleges should focus on key risk dimensions, including debt risk, cash flow risk, budget execution risk, irregular fund utilization, asset inefficiency, and breach risks in school–enterprise cooperation. A multidimensional risk indicator system should be constructed, incorporating metrics such as asset–liability ratios, cash flow ratios, budget execution rates, special fund disbursement rates, enterprise funding arrival rates, training equipment utilization rates, revenue–expenditure deviation rates, accounts receivable turnover, and frequency of irregular expenditures.

Warning thresholds should be established according to indicator significance, with a tiered response system categorized into yellow alerts, orange warnings, and red emergencies. Supported by intelligent financial systems, asset management platforms, and school–enterprise cooperation management systems, real-time data capture, monitoring, and dynamic analysis can be achieved. Automated warning notifications should be promptly delivered to financial departments and institutional leadership when thresholds are exceeded (Wang, 2025).

Upon the occurrence of warning events, rapid verification procedures should be initiated, followed by in-depth causal analysis and the formulation of targeted response strategies. This facilitates the establishment of a comprehensive management cycle of "monitoring–warning–response–feedback–optimization." Additionally, regular risk assessment mechanisms should be implemented, involving coordinated analysis by financial, auditing, school–enterprise cooperation, and asset management departments. High-frequency risk areas should be addressed through institutional refinement and procedural improvements.

Through the implementation of an intelligent early warning system, financial risk management can evolve from ex post control to ex ante prevention, from static oversight to dynamic monitoring, and from fragmented management to coordinated governance, thereby significantly enhancing the overall risk management capacity of institutions.

4.4 Advancing Full-Cycle budget management

Strengthening full-cycle budget management—encompassing formulation, execution, monitoring, adjustment, and performance evaluation—is a fundamental approach to mitigating budget execution deviations and improving the efficiency of fund utilization.

During the budgeting phase, a combination of zero-based budgeting and project database management should be adopted, focusing on key industry–education integration projects. Comprehensive feasibility analyses and cost estimations should be conducted for school–enterprise cooperation initiatives, training base construction, and discipline development projects, thereby enhancing the scientific rigor and accuracy of budget formulation. Input should be solicited from secondary colleges, cooperation departments, and training centers, while integrating industry standards, historical data, and performance objectives to avoid arbitrary or experience-based budgeting practices (Zhang, 2025).

During execution, strict budgetary constraints must be enforced, with prohibitions on unbudgeted or over-budget expenditures. Any necessary adjustments should follow standardized approval procedures. A dynamic monitoring mechanism should be established to regularly report budget execution progress, identify lagging projects and idle funds, and implement corrective measures. Overspending cases should be subject to detailed analysis and rational reallocation.

Comprehensive budget performance management should also be promoted, including scientific target setting, ongoing performance monitoring, and post-project evaluation. Evaluation results should be directly linked to subsequent budget allocations and project approvals, thereby

establishing a results-oriented mechanism characterized by "accountability for expenditure effectiveness." Through full-cycle closed-loop management, deep integration between budgeting and operational activities can be achieved, significantly improving both allocation efficiency and utilization efficiency of funds.

4.5 Enhancing financial risk control capacity

Ultimately, financial risk prevention depends on human capacity. Therefore, it is essential to cultivate a professional financial workforce with strong policy awareness, technical expertise, familiarity with industry–education integration, and a high level of risk sensitivity, while simultaneously fostering a campus-wide culture of risk awareness.

On one hand, specialized training for financial personnel should be strengthened, focusing on government accounting standards, budget performance management, internal control systems, financial regulations in school–enterprise cooperation, tax compliance, and digital tool applications. Financial staff should also be encouraged to engage with frontline units such as secondary colleges, training bases, and cooperation projects to gain practical insights into industry demands, project operations, and training processes, thereby enhancing their risk identification and judgment capabilities.

On the other hand, training programs should be provided for institutional leaders, project managers, and cooperation administrators to clarify financial policies, expenditure regulations, asset management requirements, and accountability boundaries in cooperative operations. This helps eliminate the tendency to prioritize projects while neglecting financial governance.

Through case-based warnings, policy dissemination, and integrity education, institutional awareness of compliance, accountability, and risk prevention can be strengthened, fostering a culture of standardized operations and self-discipline. Additionally, mechanisms for financial information disclosure and democratic supervision should be improved, with active engagement from auditing authorities, financial regulators, and the broader academic community, including faculty and students. This multi-stakeholder governance model contributes to a robust and collaborative risk control framework.

By enhancing workforce capacity, institutions can effectively improve governance efficiency and provide strong financial and institutional support for the high-quality development of industry–education integration.

Conclusion

Financial risk prevention in higher vocational colleges under the context of industry–education integration constitutes a systemic issue that directly affects institutional security and long-term development. In an increasingly complex financial environment, institutions must align with the realities of industry–education integration by transforming management concepts, improving institutional systems, strengthening supervision, and enhancing workforce capacity to establish a comprehensive and multi-level financial risk prevention and control framework.

Through the scientific identification, prevention, and mitigation of financial risks, institutions can ensure the orderly operation of financial activities, thereby providing a solid financial foundation for deepening industry–education integration, cultivating high-quality technical and skilled talents, and achieving sustainable, high-quality development in higher vocational education.

Conflict of Interest

The author declares that she has no conflicts of interest in this work.

Acknowledgement

The author received no financial support for this research.

References

Huang, Y. (2024). Exploration of optimization paths for financial management in higher vocational colleges. *Shanghai Business,* (10), 115–117.

Li, J. (2024). Research on financial management transformation in higher vocational colleges under the background of integrated budget management. *Finance News,* (18), 49–51.

Luo, X. (2024). Financial management innovation in higher vocational colleges from an informatization perspective. *Journal of Hubei University of Economics (Humanities and Social Sciences Edition), 21*(11), 91–93.

Wang, M. (2025). Research on the reconstruction path of financial management models in higher vocational colleges from the perspective of smart finance. *Bohai Rim Economic Outlook,* (10), 117–120.

Wang, Y. (2025). Exploration of financial management in higher vocational colleges from the perspective of internal control. *Finance News,* (18), 128–130.

Zhang, J. (2025). Mechanisms and paths of

empowering high-quality financial management development in higher vocational colleges through comprehensive budget management. *Business News,* (17), 58–60.

Zhang, P. (2024). Research on financial risk prevention and control in higher vocational colleges. *Accounting Learning,* (31), 26–28.

Zhang, X. (2024). Research on financial management practice teaching reform in higher vocational colleges driven by big data technology. *Guangdong Economy,* (18), 85–87.

How to Cite: Li, J. (2026). Risk Prevention in Financial Management at Higher Vocational Colleges against the Background of Industry-Education Integration. *Contemporary Education and Teaching Research, 07*(03), 100-105.
https://doi.org/10.61360/BoniCETR262019880304