

Forward-looking Analysis of Financial Statements for Small and Medium-sized Enterprises in the Context of Digital Transformation

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Abstract—In the era of digital transformation, small and medium-sized enterprises (SMEs) face unprecedented opportunities and challenges. Financial statements, as critical tools reflecting corporate performance and financial status, directly influence strategic decisions and sustainable competitiveness through their predictive analytical capabilities. This study focuses on forward-looking analysis of SME financial statements in the context of digital transformation, employing case analysis and literature review methodologies to systematically explore the impact of digitalization on financial statement analysis. First, through literature analysis, the theoretical foundations of digital transformation and financial management are systematically reviewed, clarifying the core concepts, phased characteristics, and impacts on financial statement structures and information disclosure. Second, selected SMEs across various industries and scales serve as case studies, where the case analysis method examines the evolving features of financial statements, the development of forward-looking indicator systems, and financial forecasting modeling, risk analysis, and scenario planning methods leveraging big data and cloud computing technologies. Third, the positive effects of digital transformation on SME financial management are analyzed, including real-time financial data processing, scientific financial decision-making, and enhanced risk prevention. Finally, innovative financial management strategies and implementation pathways are proposed to address bottlenecks such as funding constraints, technological barriers, and talent shortages encountered during digital transformation. The study reveals three key findings: (1) Digital transformation has shifted corporate financial statement analysis from post-event reviews to forward-looking forecasting; (2) Big data and cloud computing technologies provide robust technical support for financial forecasting in small and medium-sized enterprises (SMEs); (3) Resource constraints in SMEs' financial digital transformation require coordinated support from governments and society. This research offers theoretical references and practical guidance for SMEs to advance financial management digital transformation and enhance their financial forecasting capabilities.

Index Terms—Digital Transformation, Small and Medium-sized Enterprises (SMEs), Financial Statements, Forward-looking Analysis, Case Study Method, Literature Analysis Method.

1. Introduction

A. Background of the Study

In the era of global digital transformation, digital

technologies represented by big data, cloud computing, and artificial intelligence have profoundly reshaped the operational models and development patterns of all types of enterprises, bringing unprecedented opportunities and challenges to Small and Medium-sized Enterprises (SMEs). As an important part of the national economy, SMEs play an irreplaceable role in promoting economic growth, expanding employment, and driving technological innovation. However, compared with large enterprises, SMEs are often in a disadvantageous position in terms of capital, technology, and talents, making their survival and development more dependent on scientific strategic decisions and efficient resource allocation.

Financial statements, as a core tool for reflecting an enterprise's operating results, financial status, and cash flow, are the basis for enterprise managers to formulate decisions, investors to evaluate investment value, and relevant institutions to conduct regulatory supervision. In the traditional model, financial statement analysis of SMEs is mostly focused on post-event summary and feedback, mainly sorting out and analyzing historical financial data to evaluate the past operating performance of enterprises. However, with the acceleration of digital transformation, the business environment faced by SMEs has become increasingly complex and volatile, and the demand for forward-looking judgment and risk early warning in business decision-making has become more urgent. The forward-looking analysis ability of financial statements, which can predict the future development trend of enterprises, identify potential risks, and provide scientific basis for strategic layout, has become a key factor affecting the sustainable competitiveness of SMEs.

Digital transformation has not only changed the business model and management mode of SMEs but also had a profound impact on the preparation, structure, and information disclosure of their financial statements. On the one hand, digital technologies such as big data and cloud computing have broken the "information island" in the financial management of SMEs, realizing the real-time collection, integration, and processing of financial and business data, which provides a strong technical support for the forward-looking analysis of financial statements. On the other hand, the digital transformation of SMEs also

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brings new requirements to financial statement analysis: the traditional analysis indicators and methods can no longer fully adapt to the changes in the financial data structure and business model under the digital background, and it is urgent to explore a forward-looking analysis system suitable for SMEs in the digital era.

At present, most SMEs still face many pain points in the process of financial digital transformation. According to the survey data from the China Academy of Information and Communications Technology, 72% of the surveyed enterprises stated that after using intelligent financial software, the financial department has transformed from "accounting-oriented" to "analysis-oriented". However, 83% of SMEs still adopt the traditional financial model of "manual bookkeeping + Excel accounting", and 67% have the problem of "disconnection between financial data and business data". These problems make it difficult for SMEs to give full play to the forward-looking value of financial statements in the process of digital transformation, and even affect the effect of digital transformation and the sustainable development of enterprises. Therefore, it is of great practical significance to conduct in-depth research on the forward-looking analysis of financial statements of SMEs in the context of digital transformation.

B. Problem Statement

Against the background of digital transformation, the financial management of SMEs is facing a critical transition from "post-event accounting" to "forward-looking management", and the forward-looking analysis of financial statements has become an important support for the digital transformation and high-quality development of SMEs. However, in practice, there are still many prominent problems in the forward-looking analysis of financial statements of SMEs, which have become bottlenecks restricting their digital transformation and core competitiveness improvement, and these problems have not been effectively solved by existing research.

Firstly, the traditional financial statement analysis model of SMEs is difficult to adapt to the digital transformation. Most SMEs still focus on the analysis of historical financial data, lacking effective methods and tools for forward-looking prediction and risk early warning. The analysis indicators are mostly limited to traditional profitability, solvency, and operational capacity indicators, which cannot fully reflect the impact of digital transformation on the future development of enterprises, and it is difficult to meet the needs of strategic decision-making under the digital background. Secondly, the digital construction of financial management of SMEs is insufficient. Affected by factors such as capital constraints, technical barriers, and lack of talents, many SMEs have not yet established a sound digital financial management system, and the integration of financial data and business data is low, forming "data islands", which makes it difficult to effectively collect, sort out, and analyze the data needed for forward-looking analysis. Thirdly, there is a lack of a forward-looking analysis index system and practical methods suitable for SMEs in the digital era. Existing research on forward-looking

financial analysis mostly focuses on large enterprises, ignoring the characteristics of SMEs such as limited resources and weak technical capabilities, so the research results are difficult to be directly applied to SMEs.

In addition, although digital technologies such as big data and cloud computing provide technical support for the forward-looking analysis of financial statements, SMEs often face difficulties in applying these technologies due to the lack of professional talents and technical capabilities, resulting in the failure to convert technical advantages into practical effects of financial analysis. At the same time, the existing research on the impact of digital transformation on the forward-looking analysis of financial statements of SMEs is not systematic enough, and there is a lack of in-depth analysis of specific cases and targeted solutions for the bottlenecks faced by SMEs. Therefore, it is urgent to systematically explore the forward-looking analysis of financial statements of SMEs in the context of digital transformation, clarify the impact mechanism of digital transformation, build a suitable analysis system, and propose targeted solutions, so as to solve the practical problems faced by SMEs and promote their sustainable development.

C. Research Objectives

The core objective of this study is to systematically explore the forward-looking analysis of financial statements of SMEs in the context of digital transformation, clarify the impact of digital transformation on the forward-looking analysis of financial statements of SMEs, and propose targeted innovation strategies and implementation paths to help SMEs improve their forward-looking financial analysis capabilities and promote the in-depth development of financial digital transformation. Specifically, the research objectives are as follows:

1. To sort out the theoretical basis of digital transformation and financial management through literature analysis, clarify the core connotation and phased characteristics of the digital transformation of SMEs, and systematically analyze the impact of digital transformation on the structure of financial statements and information disclosure of SMEs, laying a theoretical foundation for the follow-up research.
2. To explore the changes in financial statements of SMEs under the background of digital transformation and construct a forward-looking index system of financial statements suitable for SMEs, which can comprehensively reflect the future development potential and risk status of SMEs in the digital era.
3. To analyze the application of big data and cloud computing technologies in the forward-looking analysis of financial statements of SMEs, including financial prediction modeling, risk analysis, and scenario planning methods, and summarize the practical experience and existing problems through case analysis.
4. To identify the bottleneck problems such as capital constraints, technical barriers, and talent shortages faced by SMEs in the process of digital transformation

in the forward-looking analysis of financial statements, and propose forward-looking and differentiated financial management innovation strategies and implementation paths.

5. To verify the feasibility and effectiveness of the forward-looking analysis index system and innovation strategies through typical cases, and provide theoretical reference and practical guidance for SMEs to promote the digital transformation of financial management and enhance the forward-looking analysis ability of financial statements.

D. Significance of the Study

This study has important theoretical significance and practical significance, which can make up for the deficiencies of existing research and provide effective support for the digital transformation and sustainable development of SMEs.

In terms of theoretical significance, firstly, this study enriches the cross-research results of digital transformation and financial management, systematically explores the impact mechanism of digital transformation on the forward-looking analysis of financial statements of SMEs, and expands the research perspective of forward-looking financial analysis. Secondly, this study constructs a forward-looking index system of financial statements suitable for SMEs in the digital era, which makes up for the deficiency that existing research mostly focuses on large enterprises and lacks targeted research on SMEs, and enriches the theoretical system of financial statement analysis. Thirdly, this study combines literature analysis and case analysis to explore the application of digital technologies in the forward-looking analysis of financial statements, which provides a new research idea for the integration of digital technology and financial management.

In terms of practical significance, firstly, this study can help SMEs clarify the impact of digital transformation on financial statement analysis, understand the changes in their own financial statements in the process of digital transformation, and master the methods and skills of forward-looking financial analysis, so as to improve the scientificity of strategic decision-making and the ability of risk prevention. Secondly, the forward-looking index system and financial management innovation strategies proposed in this study can provide practical guidance for SMEs to carry out forward-looking analysis of financial statements in the context of digital transformation, help SMEs break through the bottlenecks of capital, technology, and talents, and promote the in-depth development of financial digital transformation. Thirdly, this study can provide a reference for the government and social sectors to formulate policies and measures to support the digital transformation of SMEs, promote the formation of a collaborative support mechanism, and create a good development environment for the digital transformation of SMEs. Finally, the research results can help improve the overall financial management level and core competitiveness of SMEs, promote the healthy development of the SME group, and further play the important role of SMEs in the national economy.

E. Research Questions

To achieve the above research objectives and solve the existing problems, this study focuses on the following core research questions, which run through the whole research process and provide a clear direction for the follow-up research:

1. What are the specific impacts of digital transformation on the structure, information disclosure, and analysis mode of financial statements of SMEs? How does digital transformation promote the transformation of financial statement analysis of SMEs from post-event summary to forward-looking prediction?
2. Based on the characteristics of SMEs and the background of digital transformation, how to construct a scientific and operable forward-looking index system of financial statements, which can effectively reflect the future development potential and risk status of SMEs?
3. How to apply big data and cloud computing technologies to the forward-looking analysis of financial statements of SMEs? What are the specific methods of financial prediction modeling, risk analysis, and scenario planning suitable for SMEs?
4. What are the specific bottleneck problems faced by SMEs in the forward-looking analysis of financial statements in the process of digital transformation? What are the root causes of these problems?
5. What forward-looking and differentiated financial management innovation strategies and implementation paths can be proposed to help SMEs break through the existing bottlenecks and improve their forward-looking analysis capabilities of financial statements?

2. Literature Review

This section systematically combs the relevant literature on digital transformation, financial management of SMEs, forward-looking analysis of financial statements, and the correlation between them. By sorting out and evaluating the existing research results, it clarifies the research context, core viewpoints, and existing research gaps, laying a solid theoretical foundation for the in-depth development of this study. The literature review mainly focuses on four core aspects: research on digital transformation, research on financial management and financial statement analysis of SMEs, research on forward-looking analysis of financial statements, and research on the correlation between digital transformation and forward-looking analysis of financial statements.

A. Research on Digital Transformation

The concept of digital transformation originated in the early 21st century, with the continuous popularization of information technology and the deep integration of digital technology and industrial development. Scholars at home and abroad have conducted in-depth research on the connotation, driving factors, and economic consequences of digital transformation, forming a relatively rich research system.

In terms of the connotation of digital transformation, foreign scholars have different understandings from different perspectives. Porter and Heppelmann (2014) believe that digital transformation is the process of integrating digital technologies into all aspects of enterprise operations, reshaping enterprise value chains and business models, and realizing the transformation of enterprise development momentum. Westerman et al. (2014) pointed out that digital transformation is not only the application of digital technologies but also the reform of enterprise organizational structure, management concepts, and business processes, which is a comprehensive transformation involving technology, organization, and culture. Domestic scholars have also carried out targeted research on the connotation of digital transformation. Qi and Xiao (2020) pointed out that digital economy has become a key driving force for economic development, and enterprise digital transformation is the micro embodiment of digital economy development, which takes data as the core production factor and relies on digital technology to realize the optimization and upgrading of enterprise operations. Xu (2022) emphasized that digital technology not only promotes the innovation of accounting information chain but also improves the efficiency of control and supervision, which is an important driving force for the transformation of enterprise financial management.

In terms of the driving factors of digital transformation, existing research mainly focuses on internal and external factors. External factors include the development of digital technology, policy support, market competition pressure, etc.; internal factors include enterprise development strategy, resource endowment, organizational structure, and management level (Wu et al., 2022). For SMEs, the driving factors of digital transformation are more inclined to policy guidance and market competition pressure, while the constraints such as capital and talent shortages have become important obstacles to their digital transformation (Meng and Wang, 2023). In terms of the economic consequences of digital transformation, most studies believe that digital transformation can improve enterprise operational efficiency, enhance innovation capabilities, and promote high-quality enterprise development (Zhang et al., 2022). Specifically, in the field of financial management, digital transformation can optimize financial processes, improve the quality of financial information, and enhance the efficiency of financial decision-making (He et al., 2021), which provides a good technical foundation for the forward-looking analysis of financial statements.

However, existing research on digital transformation still has certain deficiencies. On the one hand, most studies focus on large enterprises, ignoring the characteristics of SMEs such as limited resources and weak technical capabilities, and the research on the digital transformation path and effect of SMEs is not in-depth enough. On the other hand, the research on the impact of digital transformation on the specific links of financial management (such as financial statement analysis) is relatively scattered, and there is a lack of systematic research on the impact mechanism of digital transformation on the forward-looking analysis of financial statements.

B. Research on Financial Management and Financial Statement Analysis of SMEs

As an important part of the national economy, SMEs have attracted extensive attention from scholars in terms of financial management and financial statement analysis. Due to the characteristics of small scale, insufficient resources, and imperfect management system, the financial management of SMEs is significantly different from that of large enterprises, and its financial statement analysis also has its own particularities.

In terms of financial management of SMEs, foreign scholars mainly focus on the problems and optimization paths of financial management. Berger and Udell (2006) pointed out that SMEs are facing serious financing constraints in the process of development, which restricts the improvement of their financial management level and the realization of digital transformation. Storey (2016) believed that the backward financial management concept and the lack of professional financial talents are the main problems faced by SMEs in financial management, which makes it difficult for SMEs to effectively use financial tools to support enterprise development. Domestic scholars have also conducted in-depth research on the financial management of SMEs. Li and Wang (2020) found that most SMEs in China still adopt the traditional financial management model, with low level of financial digitization, and there is a serious disconnection between financial data and business data, which affects the scientificity of financial decision-making. According to the survey data from the China Academy of Information and Communications Technology, 83% of SMEs still adopt the traditional financial model of "manual bookkeeping + Excel accounting", and 67% have the problem of "disconnection between financial data and business data" (China Academy of Information and Communications Technology, 2025), which further verifies the backwardness of the financial management model of SMEs.

In terms of financial statement analysis of SMEs, existing research mainly focuses on the analysis of traditional financial indicators and the application of analysis methods. Most SMEs focus on the post-event analysis of financial statements, mainly analyzing historical financial data such as profitability, solvency, and operational capacity to evaluate the past operating performance of enterprises (Chen et al., 2021). However, due to the lack of professional financial analysis talents and the limitation of analysis tools, the financial statement analysis of SMEs is often relatively simple, and it is difficult to give full play to the guiding role of financial statements in enterprise decision-making. Some scholars have tried to introduce new analysis methods to optimize the financial statement analysis of SMEs. For example, Wang et al. (2022) proposed to apply the balanced scorecard to the financial statement analysis of SMEs, which can comprehensively evaluate the operating performance of enterprises from multiple dimensions, but this method still focuses on the evaluation of past performance and lacks forward-looking analysis. In addition, with the acceleration of digital transformation, some scholars have begun to pay attention to the impact of digital technology on the financial statement analysis of SMEs, but

most of them stay on the surface of technology application, and there is a lack of in-depth research on the construction of forward-looking analysis system.

C. Research on Forward-looking Analysis of Financial Statements

Forward-looking analysis of financial statements is an important part of financial analysis, which is different from the traditional post-event summary analysis. It focuses on predicting the future development trend of enterprises, identifying potential risks, and providing scientific basis for enterprise strategic decision-making. In recent years, with the increasing volatility of the business environment, the research on forward-looking analysis of financial statements has attracted more and more attention from scholars.

In terms of the connotation and content of forward-looking analysis of financial statements, Beaver (1966) took the lead in putting forward the concept of forward-looking financial analysis, pointing out that forward-looking analysis should focus on predicting the future cash flow and solvency of enterprises, which laid the theoretical foundation for the development of forward-looking analysis. Foreign scholars have carried out in-depth research on the content of forward-looking analysis. Penman (2010) believed that forward-looking analysis of financial statements should include the prediction of enterprise future profitability, growth potential, and risk status, and proposed a forward-looking analysis framework based on financial data. Lev and Gu (2016) even put forward the view of "the end of accounting", believing that the accounting information under the traditional model can no longer meet the needs of forward-looking decision-making, and it is urgent to reform the accounting information system. Domestic scholars have also made positive explorations on forward-looking analysis. Huang (2018) pointed out that the investment in intangible assets under the current accounting standards is mostly treated as expenses, which reduces the value relevance of accounting information and is not conducive to forward-looking analysis. Zhang and Jin (2022) believed that the balance sheet needs to be reconstructed in the digital era, and the lack of digital asset accounting makes it difficult for financial statements to reflect the future development potential of enterprises.

In terms of the methods and tools of forward-looking analysis, with the development of digital technology, the application of big data, cloud computing, and other technologies has brought new opportunities for forward-looking analysis of financial statements. Foreign scholars have applied big data technology to financial prediction and risk early warning, and constructed a variety of forward-looking analysis models. For example, Altman *et al.* (2017) used big data technology to optimize the enterprise bankruptcy prediction model, which improved the accuracy of forward-looking risk warning. Domestic scholars have also carried out relevant research. Li *et al.* (2023) proposed a forward-looking financial analysis model based on cloud computing, which can realize the real-time processing and analysis of financial data and improve the timeliness and accuracy of forward-looking

prediction. In addition, some scholars have studied the construction of forward-looking analysis index system. For example, Liu and Zhang (2021) constructed a forward-looking analysis index system including growth ability, risk early warning, and innovation ability, which provides a reference for the forward-looking analysis of enterprises. However, most of these studies focus on large enterprises, and the index system and analysis methods are not fully applicable to SMEs, which is difficult to meet the needs of forward-looking analysis of SMEs in the context of digital transformation.

D. Research on the Correlation between Digital Transformation and Forward-looking Analysis of Financial Statements

With the deepening of digital transformation, more and more scholars have begun to pay attention to the impact of digital transformation on the forward-looking analysis of financial statements, and explored the internal correlation between the two. Existing research mainly focuses on two aspects: the impact of digital transformation on the quality of financial information and the application of digital technology in forward-looking analysis.

In terms of the impact of digital transformation on the quality of financial information, most studies believe that digital transformation can improve the timeliness, accuracy, and completeness of financial information, which provides a good data foundation for forward-looking analysis. Barth *et al.* (2023) took American enterprises as the research object and found that the comprehensive value relevance of accounting information has not decreased with the development of digital economy, but the value relevance of net assets and net profit has shown an opposite trend. Nie *et al.* (2022) found that digital transformation can inhibit the accrual earnings management behavior of enterprises, improve the comparability of accounting information, and lay a foundation for forward-looking analysis. Ma *et al.* (2023) pointed out that digital transformation can improve the transparency of accounting information, help stakeholders obtain more effective financial information, and promote the development of forward-looking analysis. In addition, digital transformation has also changed the structure and information disclosure of financial statements. Wang (2022) pointed out that a large number of inputs related to digital transformation cannot be recognized as assets under the current accounting standards, resulting in the lack of asset information and affecting the forward-looking analysis effect.

In terms of the application of digital technology in forward-looking analysis, existing research mainly focuses on the application of big data, cloud computing, and other technologies in financial prediction, risk analysis, and scenario planning. For example, Zhao and Wu (2024) found that digital transformation can improve the value relevance of net profit and net assets, and digital technology can help enterprises carry out more accurate forward-looking prediction. Some scholars have also studied the application of intelligent financial tools in forward-looking analysis. For example, the intelligent financial management model based on big data and artificial intelligence can realize the automation of financial processes and the

intelligence of forward-looking analysis, which helps enterprises improve the efficiency of financial decision-making (Henan Daily Press Group, 2025). However, existing research still has certain deficiencies: on the one hand, the research on the impact mechanism of digital transformation on the forward-looking analysis of SMEs is not systematic enough, and it is not clear how digital transformation promotes the transformation of financial statement analysis from post-event summary to forward-looking prediction; on the other hand, there is a lack of targeted research on the bottlenecks and solutions of SMEs in applying digital technology to carry out forward-looking analysis, and the research results are difficult to be directly applied to practice.

E. Research Gaps

Through the systematic combing of relevant literature, it can be found that existing research has laid a certain theoretical foundation for this study, but there are still obvious research gaps, which also highlights the necessity and innovation of this study.

Firstly, the existing research on digital transformation mostly focuses on large enterprises, ignoring the characteristics of SMEs such as limited resources, weak technical capabilities, and serious financing constraints. The research on the impact of digital transformation on the forward-looking analysis of financial statements of SMEs is relatively scattered, and there is a lack of systematic research on the impact mechanism and action path.

Secondly, the existing research on forward-looking analysis of financial statements mostly focuses on large enterprises, and the constructed forward-looking analysis index system and analysis methods are not fully applicable to SMEs. There is a lack of a scientific and operable forward-looking analysis index system suitable for SMEs in the context of digital transformation, which makes it difficult for SMEs to carry out effective forward-looking analysis.

Thirdly, although existing research has pointed out that digital technologies such as big data and cloud computing can support forward-looking analysis of financial statements, it does not deeply explore the specific application methods and paths of these technologies in SMEs. For the bottlenecks such as capital constraints, technical barriers, and talent shortages faced by SMEs in applying digital technology to carry out forward-looking analysis, there is a lack of targeted solutions.

Finally, the existing research on the correlation between digital transformation and forward-looking analysis of financial statements is mostly qualitative analysis, and there is a lack of in-depth verification through case analysis. The research on how to combine digital technology with forward-looking analysis to help SMEs improve their strategic decision-making ability and risk prevention ability is not in-depth enough.

In view of the above research gaps, this study takes SMEs in the context of digital transformation as the research object, focuses on the forward-looking analysis of financial statements, combines literature analysis and case analysis, explores the impact mechanism of digital transformation, constructs a suitable forward-looking analysis index system, and proposes

targeted innovation strategies and implementation paths, so as to make up for the deficiencies of existing research and provide theoretical reference and practical guidance for SMEs.

3. Research Methodology

This section focuses on the core research methods adopted in this study, namely literature analysis method and case analysis method. These two methods are closely combined with the research objectives and research questions of this study, ensuring the scientificity and operability of the research, and providing effective support for exploring the forward-looking analysis of financial statements of SMEs in the context of digital transformation.

A. Literature Analysis Method

Literature analysis method is a basic and essential research method in this study, which is used to sort out the theoretical basis, clarify the research context and identify research gaps, laying a solid theoretical foundation for the follow-up research (Sekaran & Bougie, 2016). The specific application process is as follows:

First, literature collection. Relevant literature is collected through international and domestic academic databases, including Web of Science, Scopus, JSTOR, CNKI, and CSSCI. The key search words include "digital transformation", "SMEs", "financial statement analysis", and "forward-looking analysis". The collection scope covers academic papers, monographs, research reports and policy documents published in the past 10 years (2014-2024), ensuring the timeliness and pertinence of the literature. Meanwhile, relevant literature is supplemented through the references of core literature to ensure comprehensiveness.

Second, literature sorting and screening. After collection, the literature is sorted out according to the research topic: first, the abstract and key words are read to exclude irrelevant literature; then, the full text of relevant literature is read to screen out core literature with high academic value and strong relevance. Finally, the screened literature is classified by research content, including digital transformation, SMEs' financial management, and forward-looking financial analysis.

Third, literature analysis and evaluation. On the basis of sorting, the core viewpoints, research methods and conclusions of existing literature are systematically analyzed. On the one hand, the theoretical basis of digital transformation and forward-looking financial analysis is sorted out; on the other hand, existing research gaps are summarized, highlighting the necessity and innovation of this study.

B. Case Analysis Method

Case analysis method is the core qualitative research method of this study, which takes typical SMEs as the research object, conducts in-depth investigation and analysis, and reveals the practical situation and internal laws of forward-looking financial statement analysis under digital transformation. This study adopts multiple case analysis method, selecting 4 typical SMEs from different industries and digital transformation stages to ensure the representativeness of research conclusions.

The specific content is as follows:

1) *Case Selection Criteria*

The case selection follows the principles of typicality, representativeness and accessibility: (1) Being recognized as an SME in line with national or local standards, with small scale and obvious characteristics of SMEs; (2) Having carried out digital transformation practice and invested in digital technologies such as big data in financial management; (3) Having complete financial statements and operation data to support forward-looking analysis; (4) Covering different industries and digital transformation stages to reflect differences in practice.

2) *Selected Cases*

Based on the above criteria, 4 typical SMEs are selected (enterprise names are anonymized to ensure confidentiality):

1. *Case A*: A manufacturing SME engaged in mechanical processing, in the development stage of digital transformation. With an annual turnover of about 8 million yuan and a digital transformation investment of 350,000 yuan in financial management, it has introduced intelligent financial management software, initially realized the integration of partial financial and business data, and tried to use data analysis for simple financial prediction (e.g., monthly sales and cash flow prediction with an accuracy of about 70%). (Data source: Enterprise internal financial statements and on-site research data of this study)

2. *Case B*: A service industry SME engaged in e-commerce services, in the mature stage of digital transformation. With an annual turnover of about 12 million yuan and a cumulative digital investment of 800,000 yuan in financial management, it has built a complete digital financial management system, relying on big data technology to carry out forward-looking analysis such as sales forecast and capital flow early warning (sales forecast accuracy reaches 85%, and capital flow early warning response time is within 24 hours). (Data source: Enterprise annual financial report, third-party audit report and research interview records)

(Data source: Enterprise internal financial statements, R&D statistical reports and on-site research data)3. *Case C*: A science and technology SME engaged in software development, in the mature stage of digital transformation. With an annual turnover of about 15 million yuan, 12% of its annual revenue is invested in digital construction (of which 40% is used for financial digital upgrading), it takes data as the core production factor, integrates financial data with R&D data, and

4. *Case D*: A traditional retail SME, in the initial stage of digital transformation. It has just introduced basic financial digital tools, mainly focusing on post-event financial statistics, and has not yet carried out systematic forward-looking financial analysis. (Data source: Enterprise internal financial statistics and research interview records)

3) *Case Analysis Process*

The case analysis is carried out in two stages: first, single case analysis. For each case, the digital transformation practice and the current situation of forward-looking financial statement analysis are sorted out, focusing on the application of digital technology and existing problems. Second, cross-case analysis.

By comparing the four cases, the common characteristics and differences of forward-looking analysis of SMEs in different industries and transformation stages are summarized, providing practical basis for the research conclusions.

4. Research Findings and Conclusions

A. *Research Findings*

Based on the literature analysis and case analysis of 4 typical SMEs, the key research findings are summarized as follows:

1. Digital transformation has a significant impact on the forward-looking analysis of SMEs' financial statements. SMEs in the mature stage of digital transformation (Cases B and C) have better forward-looking analysis capabilities, with higher financial prediction accuracy and more timely risk early warning, while those in the initial and development stages (Cases A and D) are limited by insufficient digital investment and data integration, and their forward-looking analysis is relatively simple.
2. There are obvious industry and stage differences in the application of digital technology in forward-looking financial analysis. Science and technology and e-commerce service SMEs (Cases B and C) have better integration of financial and business data, while manufacturing and traditional retail SMEs (Cases A and D) face more difficulties in data integration and technology application.
3. The main bottlenecks restricting SMEs' forward-looking financial analysis under digital transformation include insufficient digital investment, lack of professional talents, and incomplete data integration, which are more prominent in SMEs in the initial stage of transformation.

B. *Conclusions*

This study confirms that digital transformation can effectively promote the improvement of SMEs' forward-looking financial statement analysis capabilities, and the level of digital transformation is positively correlated with the effectiveness of forward-looking analysis.

Different industries and digital transformation stages lead to differences in SMEs' forward-looking analysis capabilities, and targeted measures are needed to address the bottlenecks such as insufficient investment and talent shortage.

The research findings provide practical reference for SMEs to improve their forward-looking financial analysis capabilities in the process of digital transformation, helping SMEs better use digital technology to optimize financial management.

5. Research Limitations, Significance, and Future Directions

A. *Research Limitations*

This study has certain limitations: first, the number of case enterprises is limited, only 4 SMEs are selected, which may affect the universality of the research conclusions; second, the research focuses on a short-term period, and the long-term

impact of digital transformation on forward-looking financial analysis is not explored; third, the research does not involve the impact of policy factors on SMEs' digital transformation and forward-looking analysis.

B. Research Significance

In practice, the research provides practical guidance for SMEs to break through the bottlenecks of forward-looking financial analysis in digital transformation, helping SMEs improve financial management efficiency and risk prevention capabilities. In theory, it supplements the relevant research on SMEs' forward-looking financial analysis under digital transformation, enriching the research on the integration of digital transformation and financial management.

C. Future Directions

Future research can expand the number and scope of case enterprises to improve the universality of conclusions; explore the long-term impact of digital transformation on SMEs' forward-looking financial analysis; and further study the role of policy support in promoting SMEs' digital transformation and forward-looking financial analysis.

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