

Application and Optimization of Financial Statement Analysis in Enterprise Financial Management

Hai Li

School of Economics and Management, Wenshan University, Wenshan 663099, Yunnan, China

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Abstract: On the common problems and optimization path of enterprise financial statement analysis application. Financial statement analysis is the core information tool of enterprise financial management and its effective implementation will be directly linked to the efficiency of resource allocation and the rationality of strategic decision making. The study focused on the practical application model of financial statement analysis to financial management undertakings such as fundraising, investment and income distribution, thoroughly analyzing the intrinsic limitation of data, shallow analysis method and the multifarious challenges on the current application of financial sentence analysis in changing external environment. In view of the challenges, the research proposed a systematic optimization path: optimization of data base of analysis, non-financial information, forward-looking data; deepening insight of method of analysis, industry and finance deep integration, scenario simulation; deepening efficiency and intelligence of analysis process, big data, artificial intelligence. These optimization paths are aimed at making financial statement analysis a predictive decision-supporting front-end value creation, and providing exquisite support for enterprises to adapt to the changing environment.

Keywords: Financial statement analysis, Enterprise financial management, Data limitations, Analytical methods

Online publication: August 24, 2026

1. Introduction

Financial statements, as a comprehensive mirror image of an enterprise's financial situation, operating results and cash flows, carry the most critical economic information. Therefore, it is a basic and vital work to analyze financial statements deeply and systematically. It is not only a management tool for enterprise managers to understand their own business essence and evaluate past performance, but also an information cornerstone for future strategic planning, investment and financing decisions and risk management. The theme of this study is "the practical application and optimization path of financial statement analysis in enterprise financial management", aiming to systematically explore the practical operation logic, realistic challenges encountered and the future evolution direction of this classical tool in the context of modern enterprise management^[1].

The purpose of this paper is to clarify the specific application mode of financial statement analysis in the core links of financial management such as enterprise financing, investment and profit distribution by combining the theoretical context and practical scenarios of financial statement analysis, and to reveal various problems limited by data quality, method selection and external environment in the current application process. Finally, we try to construct a more adaptive and forward-looking optimization path to improve the quality and effectiveness of financial analysis, thus enabling the overall level of enterprise financial management to leap forward.

2. Relevant theoretical basis

2.1. Theory of financial statement analysis

Financial statements analysis and enterprise financial management practice integration, based on a solid theoretical foundation. The core of financial statement analysis theory is to systematically interpret financial reports to evaluate the economic essence of enterprises^[2]. Its goal is to reveal the solvency, operating efficiency, profitability and growth potential of enterprises. This theory is highly based on ratio analysis, trend/stat structure analysis, etc. By means of the calculation and comparison of key financial indicators, it uncovers the data representation and Du Pont analysis, a more comprehensive framework, delves into the drivers of the financial returns, while cash flow analysis argues that cash flow reflects more convincingly the true viability and quality of the business that the value is being created than does profit. The two theories combine into a multi-level analytical toolbox.

2.2. Theory related to enterprise financial management

The core objective of enterprise financial management theory is to achieve the goal of maximizing the value of the enterprise by acquiring, utilizing and distributing funds. The development of theory includes classical theories such as capital structure, investment decisionmaking, and dividend policy. The detailed functions of the theory include a systematic exposition of the core of financial management, investing management, working capital management and profit distribution management, thus building a complete theory for optimizing the allocation of financial resources, managing risks, and making strategic management decisions.

2.3. Correlation between financial statement analysis and enterprise financial management

Based on the inherent interrelation between them, is the logical starting point of this paper. Financial statement analysis is basically a fundamental information mechanism and diagnostic instrument of financial management. Financial management decisions rely on objective and timely input of information, and financial statements, whose systematic analysis is the main and most complete source of such information^[3]. All sorts of ability indexes provided by analysis theory directly provide assessment bases and decision support for specific management operations such as financing, investment and allocation. The objectives and practical requirements of financial management also deeply guide the extent and direction of financial analysis, from general assessment to specific decision-making support. The two aspects of such a close symbiosis make financial analysis the core of information for management decisions, and management needs and constantly stimulate the improvement of analytical methods, which jointly form a closed loop of value from information insight to management decisions. The theoretical connotation provides a solid basis for continuing the discussion on its application, problems and optimization paths.

3. Practical application of financial statement analysis in enterprise financial management

3.1. Practical application in enterprise financing management

Financial statement analysis plays a critical decision-support role in funding management. Companies need to balance debt financing and equity financing to meet their operating and expansion needs, and this process is highly dependent on deep insight into their own financial situation. The analysis of cash flow statement, especially the stability and adequacy of cash flow from operating activities, provides the core proof for the ability of enterprises to repay debt principal and interest, and is an important basis for evaluating refinancing risks and formulating financing term structure^[4]. Profitability and growth trends, information presented through income statement analysis, relate to the pricing and feasibility of equity financing. Therefore, financial statement analysis essentially delimits financial boundary and risk bottom line for financing decision, guides enterprises to choose financing mode and scale matching with their solvency and profit prospect, aiming at optimizing capital cost and ensuring financial safety.

3.2. Practical application in enterprise investment management

Financial statement analysis forms the information base of project evaluation and selection in the process of enterprise investment decision making. Whether it is capital expenditure for internal expansion and reproduction, or external merger and acquisition, its decision-making cannot be separated from careful judgment on the profit potential and risk level of the underlying assets or projects. Financial statement analysis for investment decision. Trend analysis of the company's historical financial statements will be employed to analyze the growth momentum and resource consumption characteristic of core businesses, and to provide guidance for internal investment. The focus of analysis for evaluating possible investment projects is extended to future cash flow prediction. The rationality of the forecast largely depends on the in-depth understanding of the enterprise's existing operating profitability and asset operation efficiency. DuPont decomposition of return on equity shows the high margin, improved asset operation efficiency and financial leverage of a firm, and provides a clue that whether the new investment can develop the same or better model of success. For external M&A, the following comprehensive analysis of financial statements is the core part of due diligence: an attempt of determining the actual earning quality; asset value and expected financial risks in the future, such as unreasonable related party transactions, excessive goodwill and hidden liabilities. By means of this analysis, the company seeks to obtain the expected synergies and financial returns of investment activities and achieve efficient resource allocation.

3.3. Practical application in enterprise profit distribution management

Policies of profit distribution are supposed to carefully consider the interests of shareholders and the future development of the enterprise and financial statement analysis provides an important quantitative basis for decision making. The crux of decision making is at what ratio is profit distributed and retained. Profitability sustainability is a precondition for allocation decisions. With multi-period trend analysis the income statement and analysis of earnings quality, management can find out if profits are mostly based on sustainable core business or contingent income to decide a more sound basis for distributable profits. Even more important is cash flow analysis, especially the net cash flow from operating activities. Payability of dividend of an enterprise is based on its actual ability of cash generating rather than accounting profit. Without adequate free cash flow, profit distribution will harm its working capital and even threaten its solvency. At the same time, the financial

situation disclosed on the balance sheet is also very important. When companies are highly indebted or face significant future capital expenditure requirements, it is often prudent to retain more profits to enhance internal financing capacity and improve capital structure. Therefore, comprehensive financial statement analysis helps management evaluate the financial strength, future investment needs and cash flow position of the enterprise, so as to formulate a sustainable profit distribution plan that meets the current return expectations of shareholders and protects the long-term growth capital needs of the enterprise.

4. Problems existing in the application of financial statement analysis in enterprise financial management

4.1. Limitations of the report data itself

As the basis of analysis, financial statement data has inherent limitations, which directly affect the reliability and relevance of subsequent analysis. The preparation of financial statements follows uniform accounting standards, but the selection of accounting policies and the application of accounting estimates give management considerable discretion. For example, the choice of depreciation method of fixed assets, inventory valuation method, capitalization of R & D expenditure, etc. will significantly affect the profit and asset value of the current and subsequent periods, so that the report data is not a completely objective measurement result, but a product with elements of subjective judgment, which may weaken comparability between different enterprises. The historical cost measurement principle is the dominant accounting model, reflecting the past value of assets at the time of acquisition rather than current market fair value. In the case of violent fluctuations in asset prices or exchange rates, a balance sheet based on historical costs may seriously deviate from economic reality and cannot truly reveal the company's net asset value and potential gains and losses. Financial statements focus primarily on financial information that can be reliably measured in monetary terms, and a large number of key non-financial factors related to the long-term value of the enterprise, such as brand reputation, human capital quality, innovation ability, customer loyalty, and environmental and social responsibility performance, are excluded from the statements. This limitation makes it possible for analysis based solely on report data to ignore important drivers of overall enterprise value, resulting in a narrow decision horizon.

4.2. Limitations and misuses of analytical methods

Even when the data base is reliable, the analytical methods of financial statements have their own limitations, and in practice they are more commonly misused or applied mechanically, reducing the validity of the analysis. As the most commonly used tool, ratio analysis is limited in that ratio itself is static and historical, reflecting only the relationship of specific time points or periods, and it is difficult to predict the future directly. Many ratios are interrelated, and reading a single ratio in isolation can be misleading; for example, high ROE may result from excessive financial leverage rather than improved operational efficiency. Trend analysis implies assumptions about the continuation of past trends in the future, assumptions that often fail when the operating environment changes dramatically. A more general problem is the misuse of analytical methods. Much of the analysis stops at calculating and comparing superficial numbers, lacking insight into the business substance behind the numbers^[5]. For example, comparing financial ratios indiscriminately across industries, business models, or companies at different life cycle stages ignores contextual differences and may lead to very different conclusions. The application of Du Pont analysis and other comprehensive systems often flows into formula decomposition, failing to further explore the deep management drivers and business activities that affect the

driving factors such as net sales rate and asset turnover rate. This lack of superficial analysis combined with the substance of the business makes financial analysis reports a digital game that makes it difficult to provide truly insightful decision support.

4.3. Challenges posed by changes in the external environment

The dynamic external environment in which enterprises are located brings continuous and increasingly severe challenges to the application of financial statement analysis. External economic factors such as fluctuation of macro-economic cycle, adjustment of industrial policy, change of interest rate and exchange rate will directly or indirectly affect the business performance and financial situation of enterprises, which makes the financial analysis conclusion based on the assumption of stable environment in the past face failure risk when predicting the future. Expansionary financial decisions based on past high growth rates and profitability levels may not be sustainable during downturns, and may carry significant risks. The rapid iteration of technology revolution and business model, especially the rise of digital economy and platform economy, has had an impact on the structure and connotation of traditional financial statements^[6]. A large amount of intangible assets investment (such as data resources, user traffic) is often expensed under the current standards, resulting in insufficient reflection of enterprise value in the statement; complex revenue recognition models (such as subscription system, installment payment) also increase the volatility of profits and difficulty in understanding. This makes the explanatory power of traditional financial indicators decline when evaluating new economy enterprises. Global operation makes enterprises face different accounting standards, different tax regulations and geopolitical risks. The figures in consolidated statements are the result of a combination of multiple complex factors, which makes it extremely difficult to accurately decompose and attribute them, increasing the difficulty of identifying true performance and risks from statements. Environmental uncertainty requires financial analysis to go beyond the statements themselves and incorporate broader external situational insights.

5. Optimization path of financial statement analysis in enterprise financial management

5.1. Optimizing the data base

To improve the effectiveness of financial statement analysis, the first prerequisite is to optimize the data base on which it depends to ensure the quality, relevance and integrity of input information. Traditional financial statement data is restricted by accounting standards and historical cost principles, so optimization needs to start with expanding and revising data sources. Enterprises should strengthen the transparency of financial information disclosure while complying with the standards, disclose the reasons for the selection and change of key accounting policies in detail, and the judgment basis of important accounting estimates, so that users of statements can penetrate the digital surface and understand the management intention and economic essence behind the data. Even more critical is the construction and integration of non-financial information systems. Systematically collect and quantify key performance indicators such as customer satisfaction, internal process efficiency, employee competence and innovation input, and establish a correlation analysis framework with financial results. This can compensate for the lag and one-sidedness of pure financial data and reveal the drivers of value creation. In addition, it is important to introduce more forward-looking and market-oriented data.

5.2. Deepening analytical methods

Analysis should not stop at ratio calculations. For example, once a decline in the net profit margin on sales is detected, it is necessary to delve into the front-end of the business to find out whether it is due to price competition pressure on major products, an increase in raw material costs, or a surge in sales channel expenses. Similarly, when the total asset turnover rate drops, it needs to be broken down into specific items such as inventory and accounts receivable. By coordinating with the procurement, production, and sales departments, it can be determined whether it is the change in market demand that leads to inventory backlogs or whether the loose credit policy causes slower payment collection. This kind of traceability transforms static financial indicators into dynamic management diagnostic tools. Build a refined and contextual benchmarking system: One-size-fits-all approaches should be avoided in industry comparisons. The analysis should be refined to competitors or industry segments that are highly comparable in terms of business models, customer groups, and scale stages. At the same time, contextual factors such as the macro-economic cycle and regional market characteristics must be incorporated into the analysis model. For example, during an economic downturn, the financial data (such as solvency and cash flow) of companies in the same industry should be compared under stress tests instead of simply comparing absolute values, so as to draw more practical and guiding conclusions. In addition, dynamic and scenario analysis should be strengthened. Trend analysis needs to be judged in conjunction with industry life cycles and corporate strategic turning points; more importantly, financial forecasting models based on different strategic assumptions and external environmental changes (such as price fluctuations and policy adjustments) are established to conduct stress testing and sensitivity analysis to assess the financial resilience of the company and the financial consequences of strategic choices.

5.3. Strengthening technical empowerment

The rapid development of modern information technology provides an unprecedented powerful tool for the reform and upgrading of financial statement analysis. Strengthening technical empowerment is an inevitable way to break through the bottleneck of traditional analysis. Big data technology can process massive structured and unstructured data, expanding the analysis scope from closed financial data within the enterprise to external big data sources such as the entire industry chain, competitor dynamics, and consumer public opinion. Through data mining and correlation analysis, risk associations and market opportunities that are difficult to detect by traditional methods can be identified, such as warning of potential liquidity risks from supply chain data or predicting revenue changes from consumption trends on social media. With the help of big data platforms, the data sources for analysis can be expanded from internal financial ledgers to order data and logistics information from upstream and downstream of the industrial chain, public market intelligence and recruitment trends of competitors, as well as consumer reviews and trends on social media. Through data mining techniques, risks and opportunities that are difficult to capture through traditional analysis can be identified. Using business intelligence and cloud computing tools, the analysis results can be transformed into interactive dynamic dashboards. Management can intuitively gain insights into changes in key performance indicators, the contributions of different business units, and budget execution at any time. At the same time, the collaborative platform enables the finance and business departments to conduct analysis and discussions based on the same set of real time data, ensuring the synchronization of decision-making information and truly realizing the closed loop management of the integration of business and finance. Based on machine learning algorithms, multi-dimensional variables such as internal financial data and external market data can be integrated to build more

accurate sales forecasting, credit risk rating, and dynamic valuation models, far exceeding the forecasting capabilities of traditional time-series analysis.

6. Conclusion

This research systematically explores the practical applications of financial statement analysis in core aspects of corporate financial management, such as financing, investment, and profit distribution, and reveals the profound challenges it faces in terms of data foundation, analytical methods, and external adaptability. The core argument is that to break free from the limitations of descriptive work, financial statement analysis must undergo a fundamental shift from “back-end statement summarization” to “front-end decision-making insights”. It is necessary to pragmatically introduce big data and artificial intelligence tools: use big data to expand the analysis scope to the industrial chain and market sentiment; apply machine-learning models for intelligent risk early-warning and accurate prediction; rely on cloud computing and visualization platforms to achieve real-time and collaborative decision-making support. Looking ahead, as digital transformation and sustainable development become mainstream, financial statement analysis will be further integrated with operational data performance. Its role is bound to transcend the traditional financial scope and evolve into a dynamic, predictive, and strategic core decision-making support system for enterprises.

Disclosure statement

The author declares no conflict of interest.

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