MINISTRY of EDUCATION and SCIENCE of UKRAINE
Admiral Makarov National University of Shipbuilding
Faculty of Maritime Economics

Department of Intellectual and Digital Economy

"Admitted to defend the master's thesis"

Head of the Department

____

"________" ______________________2021

QUALIFYING WORK

for a master's degree

in subject: Company's key performance indicators in the context of sustainable development

performed by student group 5411
________________________**Yuping Qiu**

Head of work:
Doctor of Economics, Associate Professor
________________________***Rohov H.***

Mykolaiv – 2021

INTRODUCTION

The key performance indicators (KPIs) are the waymarks of a company's strategic management and the basis for making investment decisions. They decompose the strategic goal of the company into operable work. The literature related to the issue of efficient utilizing and visualizing KPIs has been rapidly expanding lately (Anand & Grover 2015; Kucukaltan et al. 2016; Kaganski et al. 2016 etc.). However, it does not fully take into account modern management trends. First of all, it relates to implementing the concept of corporate sustainability. The implementation of this concept makes it possible to ensure the balanced development of enterprises in the economic, social, and environmental dimensions. Nowadays, investors and management not only focus on the financial indicators of enterprises, but also sustainable non-financial indicators have become necessary information.

The purpose of the qualifying work is to substantiate the system of sustainability key performance indicators in management in the existing business environment.

According to the defined purpose in work the following tasks are set:

- expand the main provisions of the theory of KPIs;
- assess the KPIs applied in practice, using financial and non-financial reporting, on the sample of Ukrainian companies with IPO on the Warsaw and London stock exchanges;
- expand evolution of corporate sustainability practices;
- develop a system of combined financial and non-financial indicators for corporate performance evaluation;
- expand the development of a Sustainability balanced scorecards (SBSC);
- develop methods of applying the key performance indicators in sustainable balanced scorecards for managing strategic, tactic, and operational goals.

The object of the study is the processes forming the economic results of an

enterprise.

The subject of the study is the theoretical, methodological, and practical foundations for the development and application of the sustainable key performance indicators system.

The research is based on a dialectical approach to the study of economic phenomena and processes, general scientific and fundamental provisions, and principles of modern economic theory. The study used the following general scientific and special methods: logical generalization and synthesis, comparative analysis, trend extrapolation, graphical.

Scientific novelty:

The key performance indicators system and methods of its use in sustainable balanced scorecards for the implementation of the company's strategic goals were further developed.

Keywords: key performance indicators, corporate sustainability, non-financial reporting, sustainable balanced scorecards.

SECTION 1. THEORY of KEY PERFORMANCE INDICATORS

1.1 Background and current state of economic performance measurement

Key performance indicators often appear in the management of the company, Key performance indicators (KPI) are goal-based quantitative management indicators that measure process performance by setting, sampling, calculating, and analyzing key parameters of the input and output of the internal process of the organization. It is to decompose the strategic goal of the company into operable work. The targeting tool is the foundation of corporate performance management.

The concept of performance management is used by most organizations to ensure that either they are going on the right path or not. and using management's own measures of success. It's really helps deepen investors' understanding of progress and movement in business. [1.p.88]

Peter Elwin draws attention to another aspect of using KPI. The manufacturing organizations put more focus on customer satisfaction and Delivery reliability in terms of performance measurement. Measuring the performance in terms of cost, financial, quality, time, flexibility, delivery reliability, safety, customer satisfaction, employees' satisfaction, and social performance indicators have a positive significant impact on the overall organization's performance.

Performance measurement is part of companies' daily business to gain more efficient operations, which is improved by utilizing the measurement results from performance indicators. Although narrative reporting requirements remain fluid, reporting on KPIs is here to stay. It's a valuable contribution to helping companies choose which KPIs to report and what information will provide investors with a real understanding of corporate performance. [2.p.88]

Key performance indicators can be that the department head clarifies the main responsibilities of the department, and on this basis, clarifies the performance measurement indicators of the department personnel. Establishing a clear and practical KPI system is the key to good performance management. Key performance indicators are quantitative indicators used to measure the work performance of staff and are an important part of the performance plan. Determine department/individual

performance indicators according to the organization's development plan/target plan .This is good for monitoring the operation process related to performance targets and discover potential problems in time, find areas that need improvement, and feed back to the corresponding departments/individuals.

In the economic literature, as a rule, the following key performance indicators are distinguished: liquidity, acid-test ratio, current ratio, cash ratio, debt-to-equity ratio. maneuverability coefficient、ROE.ROA，EBITDA, and OIBDA. Liquidity refers to funds or assets that can be used at any time. It consists of cash, Treasury bills, notes, bonds, and any other asset that can be sold quickly. Understanding and controlling liquidity can help companies and individuals better manage and use their assets. Also, liquidity is generally defined as the ability of a financial firm to meet its debt obligations without incurring unacceptably significant losses. [3.p.88]The managers Suppose focus on another characteristic of liquidity. It is a measure of the ability and ease with which assets can be converted to cash. Liquid assets are those that can be converted to cash quickly if needed to meet financial obligations; examples of liquid assets generally include cash, central bank reserves, and government debt. To remain viable, a financial institution must have enough liquid assets to meet its near-term obligations, such as depositor withdrawals. The main measures of liquidity current ratio, capital ratio, cash ratio, quick ratio, investment ratio

Liquidity has two primary forms: market liquidity, which applies to investments and assets, and accounting liquidity, which applies to corporate or personal finances.

Market liquidity is the ability of a market participant to execute a trade or liquidate a position with little or no cost, risk or inconvenience. [4.p.88]

Investors, lenders and managers all look to a company's financial statements, using liquidity measurement ratios to evaluate liquidity risk. Liquidity is usually done by comparing liquid assets and short-term liabilities. Over-leveraged companies must take steps to reduce the gap between their cash on hand and their debt obligations. All companies and governments that have debt obligations face

liquidity risk, but central banks' liquidity is especially scrutinized. These organizations are subjected to heavy regulation and stress tests to assess their three liquidity management because they are considered economically vital institutions. Here, liquidity risk management uses accounting techniques to assess the need for cash or collateral to meet financial obligations [5.p.88]

Investors still use liquidity ratios to evaluate the value of a company's stocks or bonds, but they also care about a different kind of liquidity management. Those who trade assets on the stock market cannot just buy or sell any asset at any time; the buyers need a seller, and the sellers need a buyer. When a buyer cannot find a seller at the current price, he or she must usually raise his or her bid to entice someone to part with the asset. The opposite is true for sellers, who must reduce their ask prices to entice buyers. Assets that cannot be exchanged at a current price are considered illiquid. Investors and traders manage liquidity risk by not leaving too much of their portfolios in illiquid markets. In general, high-volume traders, in particular, want liquid markets, such as the forex currency market. [6.p.88]

According to Ernst et al. (2009), market liquidity is a market participant's ability to execute a trade or liquidate a position with little or no cost, risk or inconvenience.

In conclusion, if an exchange has a high volume of trade that is not dominated by selling, the price a buyer offers per share (the bid price) and the price the seller is willing to accept (the asking price) will be reasonably close each other. Investors, then, will not have to give up unrealized gains for a quick sale.

The liquidity of the economic entities, consisting of cash, cash equivalents and short-term investments, are of great importance to the activity of the entities because, on the market economy, the most significant and visible side for each economic entity is its ability to pay, i.e. the possibility to honour its obligations in due time. Thus, the necessity of human and material resources must be modelled according to its possibilities to ensure the cash equivalent and to cancel \its obligations to third parties.

The acid-test ratio, commonly known as the quick ratio, uses a firm's balance

sheet data to indicate whether it has sufficient short-term assets to cover its short-term liabilities.

The acid-test ratio is more useful in certain situations than the current ratio, also known as the working capital ratio, since it ignores assets such as inventory, which may be difficult to liquidate quickly.

Companies with an acid-test ratio of less than one do not have enough liquid assets to pay their current liabilities and should be treated with caution. If the acid-test ratio is much lower than the current ratio, it means that a company's current assets are highly dependent on inventory. However, this is not a bad sign in all cases, as some business models are inherently dependent on inventory. Retail stores, for example, may have very low acid-test ratios without necessarily being in danger. [6.p.88]

The numerator of the acid-test ratio can be defined in various ways, but the primary consideration should be gaining a realistic view of the company's liquid assets.

$$\text{Acid} - \text{test ratio} = \frac{\text{Cash} + \text{Marketable Securities} + \text{Accounts receivable}}{\text{Current L iabilities}} \quad (1.1)$$

Another way to calculate the numerator is to take all current assets and subtract illiquid assets. Most importantly, inventory should be subtracted. We need to pay more attention to another point: the ratio's denominator should include all current liabilities, debts and obligations due within one year. It is important to note that time is not factored into the acid-test ratio.

The Current Ratio is a liquidity ratio that measures a company's ability to pay short-term obligations. It is also known as "Liquidity Ratio", "Cash Asset Ratio", and "Cash Ratio". The Current Ratio formula is:

$$Current\ Ratio = Current\ Assets \div Current\ Liabilities \quad (1.2)$$

The ratio is mainly used to explain the company's ability to pay back its short-

term liabilities with its short-term assets (cash, inventory, receivables). The higher the current ratio, the more capable the company is of paying its obligations. If the ratio under 1 suggests that the company shows the company is not in good financial health; it does not necessarily mean that it will go bankrupt.

Companies with trouble getting paid on their receivables or long inventory turnover can run into liquidity problems. The components of the current ratio (current assets and current liabilities) can be used to derive working capital (the difference between current assets and current liabilities). Acceptable current ratios vary from industry to industry and are generally between 1.5 and 3 for healthy businesses. The calculation formula is:

$$Current\ ratio = \frac{\text{Current assets}}{\text{current liabilities}} \tag{1.3}$$

The cash ratio, sometimes referred to as the cash asset ratio is a liquidity metric that indicates a company's capacity to pay off short-term debt obligations with its cash and cash equivalents. Compared to other liquidity ratios such as the current and quick ratios, the cash ratio is a stricter, more conservative measure because only cash and cash equivalents – a company's most liquid assets – are used in the calculation.

The cash ratio refers to the ratio of current cash to current debt. It often shows that the company or individual has an excellent financial situation.

It is calculated as:

$$Cash\ ratio = \frac{\text{Cash}}{\text{Current liabilities}} \tag{1.4}$$

The cash ratio is the balance of quick assets after deducting accounts receivable to current liabilities, and it best reflects the company's ability to pay current liabilities directly. The cash ratio is generally considered to be above 20%. However, if this ratio is too high, the company's current assets have not been appropriately used, and

the profitability of cash assets is low. Too high of such assets will lead to an increase in the opportunity cost of the company.

The important components of an enterprise's key performance indicators are financial stability measures. Financial stability in the modern economic space is used fairly wide: this term is used at all levels – from a separate household or an individual entrepreneur to global financial systems and their activities. The financial stability of a commercial agency is defined by law as solvency or capability of being liable for obligations assumed for a long period. Financial stability is a component of the general stability of the enterprise, the cash flow balance, the availability of resources allowing the agency to run its activities within a long time frame, including an efficient control of its equity and borrowed capital 7and providing for the manufacture of products[7.p.88]Financial stability is an important part of sustainable development. It is a condition in which an economy's mechanisms for pricing, allocating, and managing financial risks (credit, liquidity, counterparty, market, etc.) are functioning well enough to contribute to its performance. Broadly, financial stability can be thought of in terms of the financial system's ability: (a) to facilitate both an efficient allocation of economic resources—both spatially and especially intertemporally—and the effectiveness of other economic processes (such as wealth accumulation, economic growth, and ultimately social prosperity); (b) to assess, price, allocate, and manage financial risks; and (c) to maintain its ability to perform these key functions—even when affected by external shocks or by a build-up of imbalances—primarily through self-corrective mechanisms. The financial stability definition also involves several complexities that have practical significance in assessing risks to the well-functioning financial system and the contribution public policy can make to ensuring financial stability.

Investors and administrators must understand the financial stability of a company. It can be judged by understanding the company's liquidity and dependence on external funds.

The maneuverability coefficient and movement method of equity can prove the source and share of the company's funds. It is one of the important indicators for

analyzing financial stability. The maneuverability coefficient can show the company's current liquidity capital and asset status.

The following is the formula of maneuverability coefficient;

$$Km = SOS \div SK \quad (1.5)$$

where

SOS - own working capital;

SK - equity.

The maneuverability coefficient is the ratio of the company's operating capital to liquidity. Normally, the recommended value is above 0.5. However, according to different industries, the value will be different. For example, material-intensive industries are usually higher than capital-intensive industries.

You can see the amount of equity in section III of the liability of the balance sheet. As for the volume of working capital, this is the estimated value. You can find it in one of the following ways:

$$SOS = SK - VA \quad (1.6)$$

where

SK - equity capital of the enterprise;

VA - non-current assets.

$$SOS = OA - KO \quad (1.7)$$

where

OA - current assets;

KO - short-term obligations of the enterprise.

These indicators indicate the equity share used to finance its current activities (the formation of current assets).

However, the growth of the mobility index may not represent the company's good operating conditions, as the increase in working capital or the decline in the value of assets will lead to an increase in the value. it will also lead to the deterioration of certain indicators, for example, the autonomy coefficient, which indicates an increased dependence of the enterprise on creditors

The concept of financial stability relates not only to the absence of actual

financial crises but also to the ability of the financial system to limit, contain, and deal with the emergence of imbalances before they constitute a threat to itself or economic processes. In a well-functioning and stable financial system, this occurs partly through self-corrective, market-disciplining mechanisms that create resilience and prevent problems from festering and growing into system-wide risks. In this respect, there may be a policy-related trade-off entailing the choice between allowing market mechanisms to work to resolve potential difficulties and intervening quickly and effectively—through liquidity injections via markets, financial stability be couched in terms of the potential consequences for the real economy. Disturbances in financial markets or individual financial institutions need not be considered threats to financial stability if they are not expected to damage economic activity at large. It means the incidental closing of a financial institution, a rise in asset-price volatility, and sharp and even turbulent corrections.

A stable financial system enhances economic performance in many dimensions, whereas an unstable financial system detracts from economic performance. Financial instability occurs when shocks to the financial system interfere with information flow so that the financial system can no longer do its job of channelling funds to those with productive investment opportunities. [8.p.88] Given the tight interlinkages between all of these components of the financial system, expectations of disturbances in any of the individual components can undermine the overall stability, requiring a systemic perspective. At any given time, stability or instability could result from either private institutions and actions, or official institutions and actions, or both simultaneously and iteratively. A second useful principle is that financial stability not only implies that finance adequately fulfils its role in allocating resources and risks, mobilizing savings, and facilitating wealth accumulation, development, and growth; it should also imply that the systems of payment throughout the economy function smoothly (across official and private, retail and wholesale, and formal and informal payments mechanisms).

In a broad sense, think of financial stability in terms of maintaining confidence in the financial system. Threats to that stability can come from shocks of one sort or

another. These can spread through contagion so that liquidity or the honouring of contracts becomes questioned. Furthermore, symptoms of financial instability can include volatile and unpredictable changes in prices. "[9.p.88]

Financial markets may result from competitive forces, the efficient incorporation of new information, and the economic system's self-correcting and self-disciplining mechanisms. Financial instability refers to conditions in financial markets that harm or threaten to harm an economy's performance through their impact on the working of the financial system. Such instability harms the working of the economy in various ways. It can impair the financial condition of non-financial units such as enterprises to the degree that the flow of finance becomes restricted. It can also disrupt the operations of particular financial institutions and markets to be less able to continue financing the rest of the economy.

Financial stability is a condition where the financial system can withstand shocks without giving way to cumulative processes, which impair the allocation of savings to investment opportunities and the processing of payments in the economy. [10.p.88]Financial stability impacts business systems at all levels; therefore, any manager team should quickly act on enterprise planning and process monitoring. The financial sector is usually emphasized as one of the following main business areas because the result to be achieved depends on the quality, deadline and quantity of the necessary funds.

Based on the above point of view, financial stability is a concept with rich connotations and dynamics. It reflects the state of financial operations, reflects the requirements for continuous resource allocation optimization, and serves the fundamental goal of financial development. Specifically, financial stability has the following connotations:

(a) Financial stability is a dynamic and constantly evolving concept, and its standards and connotations will change accordingly with the development of the economy and finance. It is not a fixed and solidified financial operating state. Healthy financial institutions, stable financial markets, adequate regulatory frameworks, and efficient payment and clearing

systems will adjust strategies, structures, and mechanisms within and among themselves and interact with each other to form an adjustment and control system—the overall liquidity system structure of financial risks to adapt to the ever-evolving financial situation.

(b) Financial stability is not a static state of operation that lacks welfare improvements but stability under enhanced benefits. The stability of a country's financial system should focus on promoting the efficiency of converting savings to investment and improving and perfecting the optimal allocation of resources within society. Financial stability based on continuous improvement in efficiency, optimized allocation of resources, and enhanced ability to withstand risks will help build a financial system that is sustainable, competitive, and economically efficient.

(c) Financial stability, as a state of financial operation, requires different policy measures and methods (including monetary policy and financial supervision measures, etc.) to act or influence a company to achieve, thereby objectively requiring financial stability. The means of implementation of policy tools have a careful overall consideration.

The Debt to Equity ratio (also called the “debt-equity ratio”, “risk ratio”, or “gearing”) is a mathematical model often used in determining financial stability. It is a leverage ratio that calculates total debt and financial liabilities against total shareholders' equity. Unlike the debt-assets Ratio, which uses total assets as a denominator, the D/E Ratio uses total equity. This Ratio highlights how a company's capital structure is tilted either toward debt or equity financing.

It is calculated as:

$$\frac{\text{Debt}}{\text{Equity}} = \frac{\text{Short Term Debt+Long Term Debt+Other Fixed Payments}}{\text{Shareholder}'\,Equity} \tag{1.8}$$

The D/E Ratio is an important metric used in corporate finance. It measures the degree to which a company is financing its operations through debt versus wholly-owned funds. More specifically, it reflects the ability of shareholder equity to cover all outstanding debts in the event of a business downturn. The debt-to-equity ratio is a particular type of gearing ratio.

What counts as a “good” debt-to-equity (D/E) ratio will depend on the nature of the business and its industry. Generally speaking, a D/E ratio below 1.0 would be seen as relatively safe, whereas ratios of 2.0 or higher would be considered risky. The mathematical model is most often used by bankers or investors deciding whether to give your company money. It helps them understand how you are paying for your business.

Return on assets, also called return on assets, is an index used to measure net profit created per unit of an asset—a valuable indicator for assessing a company's profitability relative to its total asset value. The calculation method is the company's annual profit divided by the total asset value, and the return on assets is generally expressed as a percentage. Sometimes called return on investment.

Return on assets (ROA) indicates how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea of how efficient a company's management is at using its assets to generate earnings.

ROA is displayed as a percentage; the higher the ROA is, the better. Businesses are ultimately about efficiency: squeezing the most out of limited resources. Comparing profits to revenue is a useful operational metric, but comparing them to the resources a company used to earn them cuts to the very feasibility of that company's existence. ROA is the simplest of such corporate bang-for-the-buck measures.

The indicator would be expressed as:

$$Return\ on\ Assets = \frac{Net\ Income}{\text{Total Assets}} \tag{1.9}$$

The limitation of the return on assets is that it cannot reflect the bank's capital

cost, and the return on net assets makes up for the lack of return on assets.

Return on Equity (ROE), also known as return on equity is the percentage of net profit to average shareholder's equity and is the corporate tax. This indicator reflects the level of return on shareholders' equity and is used to measure the efficiency of its use of its capital. The higher the index value, the higher the return from investment. This indicator reflects the ability of own capital to obtain net income.

Generally speaking, an increase in debt will lead to an increase in the return on equity.

Enterprise assets include two parts, one part is shareholder's investment, that is, owner's equity (which is the sum of shareholder's equity, corporate provident fund and retained earnings, etc.), and the other part is the capital borrowed and temporarily occupied by the company. The appropriate use of financial leverage by an enterprise can improve the efficiency of the use of funds. Excessive borrowing of funds will increase the financial risk of the enterprise but generally can increase profitability. Too few borrowed funds will reduce the efficiency of capital use. The return on net assets is an essential financial indicator to measure the efficiency of using shareholders' funds.

The return on net assets can measure the efficiency of the company's use of the capital invested by shareholders. It makes up for the lack of profit after tax per share.

Return on equity is a measure of financial performance calculated by dividing net income by shareholders' equity. Because shareholders' equity is equal to a company's assets minus its debt, ROE is considered the return on net assets. ROE is considered a gauge of a corporation's profitability and how efficient it is in generating profits.

ROE is expressed as a percentage and can be calculated for any company if net income and equity are both positive numbers. Net income is calculated before dividends paid to common shareholders and after dividends to preferred shareholders and interest to lenders.

The calculation of ROE is as follows:

$$Return\ on\ Equity = \frac{\text{Net Income}}{\text{Average Shareholders'}Equity} \quad (1.10)$$

EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) is widely used by private capital companies to calculate the company's operating capabilities. It measures a company's overall financial performance and is an alternative to the net income in some circumstances. EBITDA, however, can be misleading because it strips out the cost of capital investments like property, plant, and equipment.

EBITDA is essentially net income (or earnings) with added back interest, taxes, depreciation, and amortization. EBITDA can be used to analyze and compare profitability among companies and industries, eliminating the effects of financing and capital expenditures. EBITDA is often used in valuation ratios and can be compared to enterprise value and revenue.

Interest expenses and (to a lesser extent) interest income are added back to net income which neutralizes the cost of debt, and the sufficient interest payments have on taxes. Income taxes are also added back to net income, which does not always increase EBITDA if the company has a net loss. Companies tend to spotlight their EBITDA performance with very impressive (or even positive) net income. It is not always a telltale sign of malicious market trickery, but it can sometimes distract investors from the lack of actual profitability.

Companies use depreciation and amortization accounts to expense the cost of property, plants, and equipment or capital investments. Amortization is often used to expense the cost of software development or other intellectual property.

Regarding the calculation of EBITDA as follow

$$EBITDA = Net\ Income + Interest\ Expense + Tax\ Expense \quad (1.11)$$

Another basic formula is OIBDA (Operational Income Before Depreciation And Amortization). The difference between the two is that OIBDA is calculated from operating net income, and EBITDA is calculated from net income. OIBDA does not include non-operating income, and EBITDA includes non-operating income.

The calculation formula is :

$$OIBDA = Operation\ Income + Depreciation + Amortization + Tax + Interest \quad (1.12)$$

OIBDA is a measure of financial performance used by companies to show profitability in their core business activities. OIBDA excludes the effects of capital spending on fixed assets, such as equipment, and the interest expense of carrying debt. Sometimes OIBDA may not include changes in accounting principles that are not indicative of core operating results, income from discontinued operations, and the earnings and losses of subsidiaries.

Before depreciation and amortization (OIBDA), operating income attempts to show how much income a company is earning for its core business. By analyzing a company's OIBDA, we can see how well it generates revenue from sales while managing its production and operating expenses. OIBDA and EBITDA are similar but use different income numbers as their starting points.

The OIBDA calculation begins with operating income, while EBITDA begins with net income, representing the accounting period's profit. Unlike EBITDA, OIBDA does not incorporate non-operation income or one-time charges. One-time items ultimately add or deduct from a company's profit or earnings but are not included in OIBDA.

This can be seen as an advantage for comparison purposes since non-operating income usually does not reoccur year after year. Its separation from operating income ensures that the calculation only reflects the income earned from core operations.

1.2 Performance measurement in value-based management

In modern company management, many new management methods for improving organizational performance have emerged: total quality management, flat organization, authorization, continuous improvement, reengineering, improvement, team building, etc. Many people succeeded-but there are also many failures. Failure

is usually because the performance goal is unclear or does not match the ultimate goal of creating value. Value-based management (VBM) can solve this problem. It is a precise and clear indicator, and the entire company's relationship system can be built on VBM.

Firms perform their activities in a business environment, which requires them to implement such a system of indicators that illustrates value and profitability in a better way. For the ongoing strategic development of every economic entity measuring business, performance is significant. As we have known them so far, accounting systems are inadequate and do not respond to a growing demand for efficient capital markets and the demand of owners. Constantly increasing efficiency in capital markets requires a more efficient allocation of capital within firms. Therefore, a new system of indicators, such as Value Based Management (VBM) - management based on value, and management to increase (market) value [11.p.88], reflects the opportunities and threats much better is urgent and necessary. Value-based management includes the following indicators:

CVA, EVA, MVA, EBO, CFROI.

$$CVA = gross\ cash\ flow - conomic\ depreciation - capital\ charge \quad (1.13)$$

Where

CVA = Cash Value Added

$$EVA = NOPAT - (Invested\ Capital * WACC) \quad (1.14)$$

Where

EVA= Economic Value Added

NOPAT= Net operating profit after taxes

WACC= Weighted average cost of capital

$$MVA = V - K \quad (1.15)$$

Where

MVA= market value added

V= the market value of the firm, including the value of the firm's equity and debt
K= the total amount of capital invested in the firm.

The idea of VBM is simple. The future cash flow can represent the company's value to a certain extent. Only when a company invests capital in a return that exceeds the cost of capital will it create value. VBM extends these concepts by focusing on how companies use cash flow to make major strategies and daily operational decisions. If the company formulates and uses VBM reasonably, it will be an effective management method that can combine its overall goals, analysis techniques and management processes and focus on critical value drivers.

VBM is not perfect, and there are often pitfalls. It can be an activity in which employees participate and impact the front-line operation managers or their decisions. If a VBM that is not suitable for the company's development is formulated, it will decline its efficiency or a development strategy error.

You cannot just focus on how to formulate VBM. It should be about the reasons and ways of changing corporate culture. Value-based managers are as interested in the subtleties of organizational behaviour as using valuation as a performance indicator and decision-making tool.

The company's ultimate financial goal is to maximize value, and this requires a reasonable VBM. Traditional financial performance indicators, such as earnings or earnings growth, do not always represent the company's development. In order to focus more directly on creating value, companies should set goals based on the discounted value of cash flows, which is the most direct measure of value creation. These goals also need to be differentiated into shorter-term and more objective financial performance goals.

Companies also need non-financial goals related to customer satisfaction, product innovation, and employee satisfaction to motivate and guide the organization. These goals are not contradictory to value maximization. On the contrary, the most profitable companies are usually the ones that excel in these areas. Non-financial goals must be, and goals must be suitable for different levels within the organization. For heads of business units, the goal may be straightforward value

creation measured in financial terms. The goal of a functional manager can be expressed in terms of customer service, market share, product quality, or productivity. Manufacturing managers may focus on unit cost, cycle time, or defect rates. In product development, the problem may be the time required to develop a new product, the number of products developed, and the performance compared to competitors. Setting suitable VBM for different departments is an essential indicator for the stable development of the company.

Performance assessment can be the result of both financial and non-financial nature, such as the number of complaints and delivery time (Customer Satisfaction Index). Generally, there are various criteria for the performance assessment of companies. Implementing the inappropriate criteria for performance assessment ends in the situation where the company's value is not directed toward the actual value and, as a result, causes the loss of a group of shareholders and the enormous profit。

The choice of performance indicators will seriously affect decision making. Transforming into values can have a considerable impact. VBM is not only effective for departments. It can also be based on VBM when making significant decisions. Finding value drivers an essential part of VBM is to have a deep understanding of the performance variables that create business value-key value drivers. This understanding is essential because organizations cannot act directly on value. It must act on the things it can affect customer satisfaction, costs, capital expenditures, etc. In addition, through these value drivers, senior managers can understand other parts of the organization and establish a dialogue about their desired goals. A value driver is any variable that affects the value of a company. However, to be effective, value drivers need to be organized to determine which factors have the most significant impact and assign responsibilities to individuals who can help the organization achieve its goals.

Value drivers must be defined at a level of detail consistent with the decision variables directly controlled by the line management. General value drivers such as

sales growth, operating profit margins, and capital turnover may apply to most business units, but they lack specificity and cannot be used well at the grassroots level. This kind of problem must combine its economic and community factors to formulate VBM. It will play an indispensable influence in maximizing the value of the company.

How to adhere to the implementation of VBM, every decision-maker in the company must participate. Four basic management processes collectively manage the adoption of VBM. First, the company or business department develops strategies to maximize value. Second, it translates this strategy into short-term and long-term performance goals defined as key value drivers. Third, it formulates an action plan and budget to determine the steps to achieve these goals in the next year. Finally, it established a performance measurement and incentive system to monitor performance against goals and encourage employees to achieve their goals. These four processes are interrelated across the company at the company, business unit, and functional levels. If you want to achieve its value creation goals, strategy and performance goals must be consistent across the organization. Although the strategy formulation process must always be based on maximizing value, and the implementation will vary by organization level.

A firm must operate on a strategic feedback loop which means a constant evaluation of strategies in which doing management evaluate? by using information from the strategies to make necessary adjustments in their firms later. There are many cases where the scope of a business reality does not work as it should, but there are sporadic cases where it functions efficiently. Financial simulation of business reality, of course, has to consider a discounted cash flow. According to Morin and Jarell [12.p.88], value derives from three broad areas of decision-making: strategic, financial and corporate. Strategic determinants include production and marketing strategies and portfolio planning. Financial determinants include the optimization of capital structure and risk management. Corporate determinants include governance, mainly rewarding executive managers and business evaluation. VBM is a relatively simple framework for setting objectives of those business

decisions that add economic value to a firm in both the short and long term. Several approaches to quantifying a corporate value exist, and they all have roots in a discounted cash flow model since this is also the method and manner used by investors and capital markets to value their firms and securities. The value of every firm is a function of expected future cash flows correspondingly discounted with relation to risk. This is nothing new, as the discounting method has been used for decades. However, VBM puts this discounting to good use. As an approach extends it to business operations as a whole, thus contributing to strategic decisions about the value and according to Morin and Jarrell [12.p.88], it establishes an increase in these values as a basis for determining a corporate responsibility.

At the enterprise level, the strategy is mainly to decide which businesses to engage in, use potential synergies across business departments, and allocate resources across businesses. In the VBM environment, senior management has formulated a company strategy that maximizes the company's overall value, including the purchase and sale of business units as appropriate. The strategy should be based on a thorough understanding of the business unit strategy. At the business unit level, strategy formulation usually requires identifying alternative strategies, evaluating them, and selecting the strategy with the highest value. The strategy chosen should clarify how the business unit will gain a competitive advantage to create value. This explanation should be a thorough analysis of the market, competitors, and unit assets and skills. Then the VBM element of the strategy comes into play. They include:

• Assess valuation results and critical assumptions that drive strategic value. These assumptions can then be analyzed and challenged in discussions with senior management.

• Weigh the value of abandoned alternative strategies and the reasons for rejecting them.

• Describe resource requirements. VBM usually allows business unit managers to focus on the balance sheet for the first time. Human resource requirements should also be specified.

• Summarize strategic plan forecasts, focusing on key value drivers. These should be supplemented by an analysis of the return on invested capital over time and relative to competitors.

• Analyze alternatives to assess the impact of competitive threats or opportunities. Formulating business unit strategies does not have to be a bureaucratic time slot; if VBM is introduced while redesigning the planning process, it can even reduce the time and cost associated with planning.When applying VBM to goal setting, the principles of goal need to be followed:

The company can set goals based on key value drivers, including financial and non-financial goals. The latter helps prevent the "game" of short-term financial goals. For example, R&D-intensive companies may improve their short-term financial performance by delaying R&D expenditures, but this will weaken their ability to remain competitive in the long term. One solution is to set a non-financial goal, such as progress towards a specific R&D goal, to supplement the financial goal. Customize goals based on different levels within the organization. Senior business unit managers should set overall financial performance goals.

The goal is the way management communicates its expectations. Without goals, the organization does not know where to go and unit-wide non-financial goals. Functional managers need functional objectives, such as unit cost and quality—link short-term goals with long-term goals. One method we particularly like is to set relevant performance targets for ten, three and one years. The ten-year goal expresses a company's aspirations; the three-year goal defines how much progress must be made during this period to achieve the ten-year goal; the one-year goal is the manager's work budget. Ideally, you should always set goals based on value, but since the value is always based on long-term future cash flows and depends on the evaluation of the future, short-term goals require a more direct measurement standard that comes from the actual situation of a single project Performance year. Economic profit is a short-term financial performance indicator closely related to value creation. It is defined as Economic profit = invested capital x (return on the invested capital-weighted average cost of capital). Economic profit measures the gap

between a company's income over time and the minimum income to satisfy investors. Over time, maximizing economic profits will also maximize the value of the company.

An action plan translate a strategy into specific steps the organization will take to achieve its goals, especially in the short term. The plan must determine the actions the organization will take to pursue its goals in an orderly manner.

On the other hand, performance measurement and incentive systems can track achieving goals and encourage managers and other employees to achieve goals. First-line supervisors and employees rarely have clear performance measurement standards related to the company's long-term strategy, and the company's development often requires the cooperation of the grassroots. Therefore, VBM may force companies to modify their traditional methods of these systems. In particular, it transforms performance measurement from an accounting-driven to a management-driven. Nevertheless, developing a performance measurement system is relatively simple for companies that understand their key value drivers and set short- and long-term goals.

VBM will produce long-term changes in business processes, organizational values, and ways of assuming responsibility. Hasperslag et al. [13.p.88] concluded that VBM is more about culture than about financial changes. According to the company's mission and the company's overall values, each company implements VBM differently. The company's purpose can be economical (shareholder value) or directly target other components (stakeholder value).

Value-based management (VBM) represents a modern approach to corporate governance and guidance, focusing on value creation. CIMA (2004) defines this concept as "a management process that effectively links strategy, measurement, and operation processes with the ultimate goal of creating shareholder value." VBM provides consistency in mission, strategy, culture, communication, organizational structure, and decision-making processes, but most importantly, it supports performance measurement and consistency with reward and incentive tools. This leads to focusing on three main components: creating value, managing value, and

measuring value.

The system of indicators devised on the value-based management (VBM), which on the one hand expresses value and profitability, and on the other, it reflects the opportunities and points out the dangers. Last but not least, the owners - investors, can strongly bind the firm's management to strive to increase the value of their property.

1.3 Sustainable development and corporate Sustainability.

The key performance indicators depend on a concept of the company development. Over the past thirty years, the concept of sustainable development has gradually become the fundamental basis for forming corporate strategies. Sustainable development is not only to meet the needs of contemporary people but not to harm the development of generation to come. It is necessary not just to achieve the goal of economic development but also protect the survival needs of humankind. Sustainable development is not equal to contact with natural resources. Protection is an essential aspect of sustainable development. The core of sustainable development is development, but it requires economic and social development based on strictly controlling the population, improving the population's quality, protecting the environment, and continuing the use of resources.

Since human activities have transformed the biosphere, leading to global climate change, biodiversity loss, and various types of pollution, green and sustainable business has been developed to support management in the face of new challenges. Decision-makers outside and inside the company need business reports because they provide information on a company's business activity. The business reporting system includes financial and nonfinancial financial reports that are interrelated and aim to provide an integrative and comprehensive overview of a company's business activities, their results, and consequences for people and the environment.

Sustainable business success is constructed gradually by achieving ecological standards above the usual norms, sustainably forming value creation chains,

developing eco-friendly products and services, introducing new business models, and opening new markets. From a sustainable development perspective, and strike a balance between the two —the economic, social and ecological aspects of corporate business responsibilities. The modern business economy has increasingly clear requirements for nonfinancial financial reporting, including social and ecological reporting. Business, that is, sustainable business practices or Sustainability. Previous separation of economic, social and environmental development is no longer accepted.

In formulating an effective, sustainable development strategy, three important indicators should be considered: economic, environmental, and social. It is necessary to study natural, social, ecological, economic and fundamental relationships in using natural resources to ensure global sustainable development。

The objectives of sustainability indicators include (a) increase awareness and sustainable understanding; (b) inform concise data on the current state and performance trends for decision making; (c) measure progress toward established goals; (d) promote organizational learning; (e) provide a tool to measure the organization's achievements against sustainability goals; and (f) provide a tool that encourages stakeholder involvement in decision making, among others. In this sense, the indicators should reflect the reality of the organization's business, values, and culture to be efficient and consistent.

In November 1991, the International Union of Ecology (INTECO) and the International Union of Biological Sciences (IUBS) organized a symposium on sustainable development issues. The results of the seminar developed and deepened the natural attributes of the concept of sustainable development and defined sustainable development as: "protecting and strengthening the production and renewal capacity of the environmental system", which means that the sustainable development of the system does not exceed the environment and renew the capacity development.

In recent years, countries have begun to pay attention to climate issues and have introduced related policies. For the stable development of the company,

environmental problems are inevitable.

The environmental aspect of sustainability is related to energy, water, waste, emissions, product, resources (materials), effluent ts, labels and certificates, logistics, environmental expenditures/investments, impacts/environmental degradation, and soil. These environmental aspects are in line with the requirements that industries must meet to become sustainable and the necessary conditions to achieve industrial Sustainability as described. However, in terms of sustainability indicators in each environmental aspect, there are weaknesses, such as the emphasis on reuse and recycling of water, consumption of hazardous materials, reuse and recycling of products, reverse logistics, environmental fines, and concerns about the origin of natural resources.

The terrestrial globe is undergoing changes that show the environmental imbalance, revealing the human being as the leading cause of these changes through consumption and production reflected in deforestation, endangered plant and animal species, air and water pollution, greenhouse effect, among others. Consumption and production comprise the vestiges that our development is unsustainable and threatens the balance of the planet and the existence of human beings. Management needs to motivate the company to devote time and energy to sustainable development and encourage academics to explore new methods of business reporting. Therefore, it contributes to the knowledge and well-being of the whole world. Such measures may arouse the interest of all stakeholders: management, owners, and employees act as internal stakeholders, while investors, customers, supply chains, insurance companies, labour unions, media and local communities act as external stakeholders.

Sustainable development can be achieved through a new vision attributed to industrial processes concerning the control of emissions of gases, reuse and recycling of wastes, types and quantities of environmental resources, among others. This vision is not considered easy to achieve since it involves high levels of corporate management, production, and consumption by society. In this sense, ecological, social, and economic pressure is increasing in industrial organizations,

as the pollution generated by them has increased to levels never reached before. Determining the direction of most industrial organizations concerning the level of sustainability is subjective and difficult to implement.

In this sense, a systematic review of the literature was carried out (by whom and when?) to analyze the characteristics, indicators, limitations, benefits, and conclusions of the scientific productions on industrial sustainability to propose a framework of generic sustainability indicators to industry. Facilities and products usually cause environmental pollution throughout their lifetime, require a large amount of energy to operate, and can create tremendous waste in its latest sustainability report are related to the company's environmental responsibility: climate change, air quality and emissions, tailings management, waste management, water stewardship, soil management rehabilitation and biodiversity.

The actions used for sustainable development relate to the technical, financial, managerial, and, in particular, strategic skills to achieve sustainability. In this sense, these actions to achieve sustainable development can alter the trajectory of the system quality. That is, they may allow interventions at the level of Sustainability. Sustainability consists of a goal, or parameter (final objective), defined through scientific criteria, which measures and tracks the results generated by sustainable development strategies. In summary, in this study, the idea of sustainability is linked to measuring the quality of the industrial system that seeks to measure all aspects of the Triple Bottom Line using indicators.

The foundation of business is value creation. Creating financial value for owners is a widely accepted business goal measured with profit and communicated in financial reports. Because of environmental changes, more and more companies create sustainable values for stakeholders and communicate them by nonfinancial financial or sustainable reports. Corporate Sustainability can be considered an invaluable tool in analyzing cost reduction, risk management, development of new products and promotion of internal, cultural and structural changes. Most industrial practices are not sustainable due to the excessive consumption needs of nonrenewable natural resources. Sustainable production means producing less, with

higher quality and durability, lower environmental impacts and higher profitability.

The model for measuring the Sustainability of industrial organizations must meet the conditions suggested by Doˇcekalová and Kocmanova[14.p.88] : (a) integrate the Triple Bottom Line aspects; (b) be based on financial and nonfinancial financial indicators; (c) reflect the particularities of the activities of the industry; (d) ease of interpretation of results; (e) include the principle of benchmarking; (f) availability of the data for the calculations; and (g) simple calculations. Tokos et al. emphasized that the main obstacles are reliable data and the information needed for evaluation.

Sustainability indicators can be identified and selected based on the top-down (main ones) and bottom-up (complementary or specific) approaches. The top-down approach allows experts and researchers to define a set of indicators at the macro level. In contrast, the bottom-up approach allows the systematic participation of local stakeholders, at a micro-level, in defining this framework of specific indicators.

The benefits that the tools of sustainability (set of indicators) can provide industries are summed up in the generation of information for a level of management beyond the traditional on these benefits as a generation of information that helps in anticipating conditions and trends, and industries differentiate with this element to increase their competitiveness because they allow developing social capacities and environmental problems. There would be difficulties in being imitated by competitors.

The social aspects are related to employees, work, clients/consumers, community, stakeholders; the company formulates reasonable employee indicators and pays attention to community conditions to make industries more sustainable, improve the employee welfare system and provide necessary assistance to employees and their families. According to various indicators, to plan employee salaries. Management To strengthen the relationship between the company and the community, public participation is a necessary guarantee for achieving sustainable development and capacity building for sustainable development. This is because sustainable development goals and actions must rely on the recognition, support, and participation of the public and social organizations. The public, organization, and

organization's participation methods and levels will determine the realization of the sustainable development goals. The public's participation in sustainable development should be comprehensive. The public and social stakeholders must participate in environmental, and development decisions, especially those that may affect their lives and work, and they need to participate in the supervision of the decision-making process.

Understanding and solving social responsibility is the company's main focus. Need to provide necessities and protect the human rights of employees. Especially in some dangerous positions, the company needs to pay more attention to social responsibility. They also need to recognize and respect diversity, the culture, customs and values of the communities in which they operate. Sustainability frameworks include human rights, community, ethics and integrity, and they maintain social responsibility through these frameworks.

Sustainable development is a kind of development with equal opportunities and benefits. It includes the balanced development of various departments in the same generation, that is, the development of one department should not be at the expense of the development of other departments; it also includes the balanced development of employees, that is, it not only meets the development needs of employees but does not harm the company. This principle believes that the company and employees are in the same living space, and they have the same right to enjoy the natural resources and social wealth in this space.

Also, Companies need to increase women's participation in their workspaces. Furthermore, they made several plans to ensure the retention and development of talents, including regularly upgrading employee skills to help them grow. The management's broad attention to gender diversity and talent development will also help companies improve financial performance.

Any discussion on sustainability is incomplete without discussing economic sustainability. A company needs to stay in business by being economically sustainable. Global Reporting Initiative (GRI) also recommends reporting on environmental, social and economic responsibility to provide a holistic view of a

company’s sustainability performance. Economic responsibility refers to a company's responsibility to deliver long-term profit to stakeholders, including shareholders, without compromising on the company’s environmental and social responsibilities.

Sustainable development is the basic future income used today" "When the welfare development of the contemporary people can be maintained, the future welfare development will not be reduced." (D- Pearce)

Companies need to be committed to improving profitability through the management and long-term responsibility, cost reduction through economies of scale, divestiture of unprofitable factories and launch more products. Creating differentiated products focused on sustainability and making sustainability a core part of their corporate strategy should help companies? survive in such a complex business environment and improve their financial situation, performance and a further return to investors. Focus on financial value and the financial goal is a predominantly short-time and a very narrow understanding of business fundamentals. It ignores the ways of achieving it and all the consequences for people and the planet: the search for profitability maximization justifies depletion of natural resources, water, air, soil, light, as well as noise, electromagnetic and other types of pollution, loss of biodiversity, and climate change and it ignores human rights and income inequality. It is necessary to change the current business paradigm and employ a broader perspective that considers human rights and environmental issues.

Business managers need always pay attention to sustainable development and start making sustainability part of their core business. Management should be aware of the environmental impact of sustainable development on their business. In addition, sufficient resources and attention should be invested in community construction. The company’s sustainability footprint can span multiple regions and processes, and strive to reduce their footprint through life cycle analysis of their facilities and process Improve. By using these tools, management has been able to formulate sustainable development strategies and update them as more information becomes available. By improving their sustainability strategy and involving the

stakeholders, they have determined the environmental, social and economic responsibility. Their targeted initiatives in each department provide successful reducing emissions and waste, increasing the use and recovery rate of renewable energy, providing employees with better working conditions, protecting human rights and economic benefits for employees and local communities.

In the past, economic growth often seemed to depend on the consumption of natural The supply of resources seems to be unlimited. The result is a "resource crisis", threats of shortages and rising prices. Today, more and more citizens and economists are looking for different economic models in which wealth can be created without harming the environment. On the other hand, financial reports reflect the monetary and short-term aspects of business value creation is only one dimension of business activities, proper shareholder. Nonfinancial report found existing social and environmental All aspects of business activities reflect non-monetary and long-term value. It is essential to all stakeholders. They embody a sustainable approach Business level.(p89.15)

SECTION 2. ANALYSIS of COMPANIES' ECONOMIC PERFORMANCE and CORPORATE SUSTAINABILITY

2.1 Background and current state of economic performance measurement

The symbol of modern corporate strategic management is the key performance indicator, and investors often formulate appropriate investment strategies based on this indicator. In addition, investors can use financial analysis to understand the status and operating results of the company. Internal information users (including management and employees, etc.) and external information users (investors, tax authorities, etc.) can use financial analysis to obtain necessary corporate financial information. The financial analysis of an enterprise is an essential task, and managers need to manage the financial analysis of the enterprise carefully. If the financial analysis is not adequately managed, this will lead to disclosing important company information.

Nowadays, investors often use financial statements to analyze the financial status, profitability, and solvency of enterprises in the development process, and management can also use financial statements to improve corporate financial management. The main content of the financial statement is the balance sheet, the income statement, and the cash flow statement. Investors and management use financial statements to understand better the company's basic financial information in the past, present, and future. The content of financial statement analysis is mainly divided into four parts: The first is to analyze the primary financial status of the company, including the assets, related rights and interests, and cash flows owned by the company; the second is to analyze the company's ability to repay debts, which is often an analysis of corporate finance The basis of the situation. The third is to analyze the company's ability to operate assets. The leading indicators include analysis of total asset turnover and current asset turnover. The fourth is to understand the profitability of the company.

The main methods for investors and management to analyze corporate financial

statements include ratio analysis, comparative analysis, trend analysis, structural analysis, factor analysis, chart analysis, project analysis, etc. The management can combine these methods according to different situations and decision-making requirements.

Financial statement analysis aims to provide information users with accurate corporate financial information. The purpose of financial statement analysis will vary with users of different identities. The primary purpose of financial statement analysis can be divided into four parts: First, investors can judge the enterprise's assets through financial statements. Investors can also analyze the financial status and profitability of the company, which is an essential basis for judging whether to invest; second, creditors often analyze the company's debt repayment ability, remuneration, etc., and creditors can decide whether to grant corporate loans based on these indicators; Third, the management needs to have comprehensive analysis and understanding of the company's financial statements in order to formulate financial policies better and improve the business conditions of the company; fourth, financial statement analysis is also the primary method to understand the company's tax status and the primary income of employees.

In the analysis of financial statements, the company's assets and liabilities will affect the balance sheet indicators. The balance sheet is indispensable in corporate financing and investment; the company can formulate or adjust the development according to the income statement and the actual development of the company Strategy, income statement often reflects the company's current business operations. Companies tend to expand and invest in high-profit areas. Investors often use cash flow as a reference to understand the company's capital turnover and debt repayment capabilities. Every company's decision-making and development needs cash flow as the basis. If the cash flow is insufficient, it will affect the development and development of the project.

Financial and non-financial reports are often applied to the practical application of KPF, and this information is necessary for investors. The sample of this investigation includes 15 Ukrainian companies in the metallurgical, mining, food

industry, oil and gas, and agricultural sectors. These companies are listed on the Warsaw and London Stock Exchanges (Table

Tab2 .1

The study samples

Company	Branch of the economy	Stock exchange	IPO year
Ukrproduct group	Food industry	LSE	2005
Astarta	Agriculture	WSE	2006
Ferrexpo	Metallurgical and mining industry	LSE	2007
Nostra Terra	Gas industry	LSE	2007
Kernel	Agriculture	WSE	2007
Random	Agriculture	LSE	2007
MXP	Agriculture	LSE	2008
Cadogan Petroleum	Gas industry	LSE	2008
Agrology group-PLC	Agriculture	WSE	2010
Groton	Agriculture	WSE	2010
Milkiland	Food industry	WSE	2010
INC	Agriculture	WSE	2011
KSG Agro	Agriculture	WSE	2011
Ovostar Union	Agriculture	WSE	2011
Vestas	Industrial production	WSE	2011

Key performance indicators play a significant role in Kernel's financial statements. These indicators include earnings per share (EPS), ROE, ROIC (the sum of net profit and financial costs attributable to shareholders, divided by the sum of the average period of debt and equity), net income/invested capital, gross profit

margin, EBITDA margin, Debt/equity ratio, debt/asset ratio, net debt/EBITDA, adjusted net debt/EBITDA, EBITDA/interest.

The values of these indicators for the analyzed company are shown in Appendix A. Business report data shows that the COVID pandemic has significantly deteriorated all financial indicators. However, this does not apply to all companies, such as forms. One shows the value of the EBITDA margin for companies to achieve positive dynamics in 2020.

Tab 2.2

EBITDA margin

Company	**Branch of the economy**	**2018**	**2019**	**2020**
Astarta	Agriculture	4.4	3.0	3.5
Nostra Terra	Gas industry	4.1	4.0	4.5
Kernel	Agriculture	8.3	5.4	6.7
Cadogan Petroleum	Gas industry	4.7	4.4	5.3
Groton	Agriculture	3.3	2.7	4.1
Milkiland	Food industry	1.6	0.5	4
Vestas	Industrial production	4.9	6.7	7.2

The data in Table 1 shows the active development of companies operating in the monopoly oil and gas market and companies in the agricultural and food industries. These companies are eligible for IPO proves the effectiveness of key performance indicators for corporate management. Figure 2 shows the EBITDA margin forecasts of Astarta, Milkiland, Ovostar, and Vestas, which illustrates the difference in indicator dynamics.

The well-known prediction accuracy metric (coefficient of determination R2) is used to judge the prediction accuracy. The data results in Figure 2 indicate that the

predictive model explains 5% of the variability.

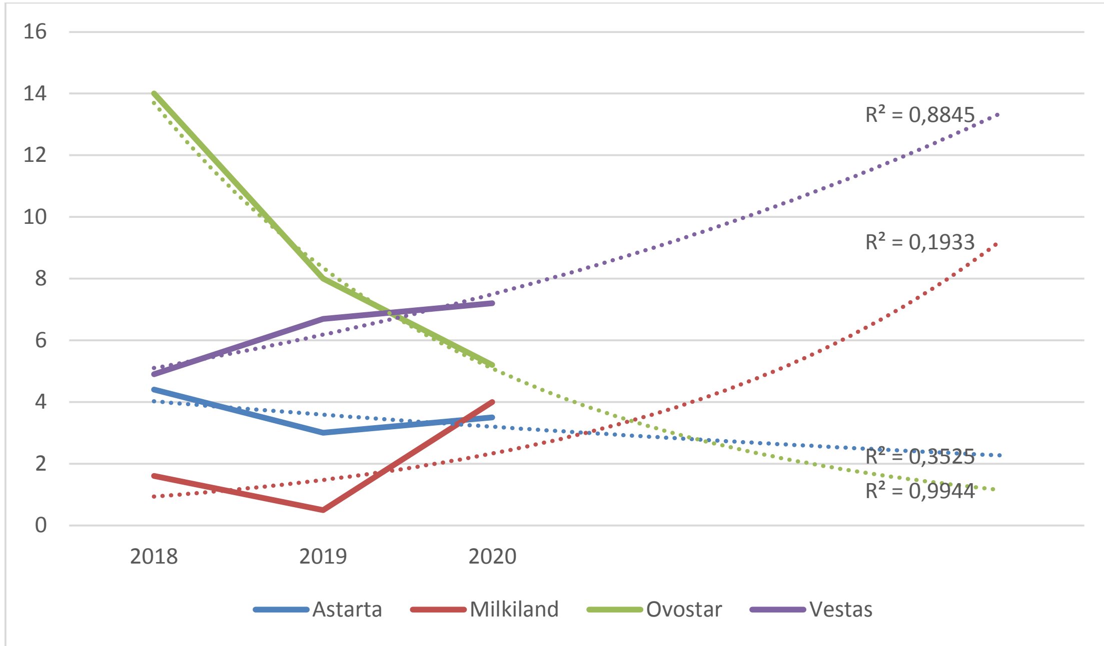

Figure 2.1 EBITDA margin forecast

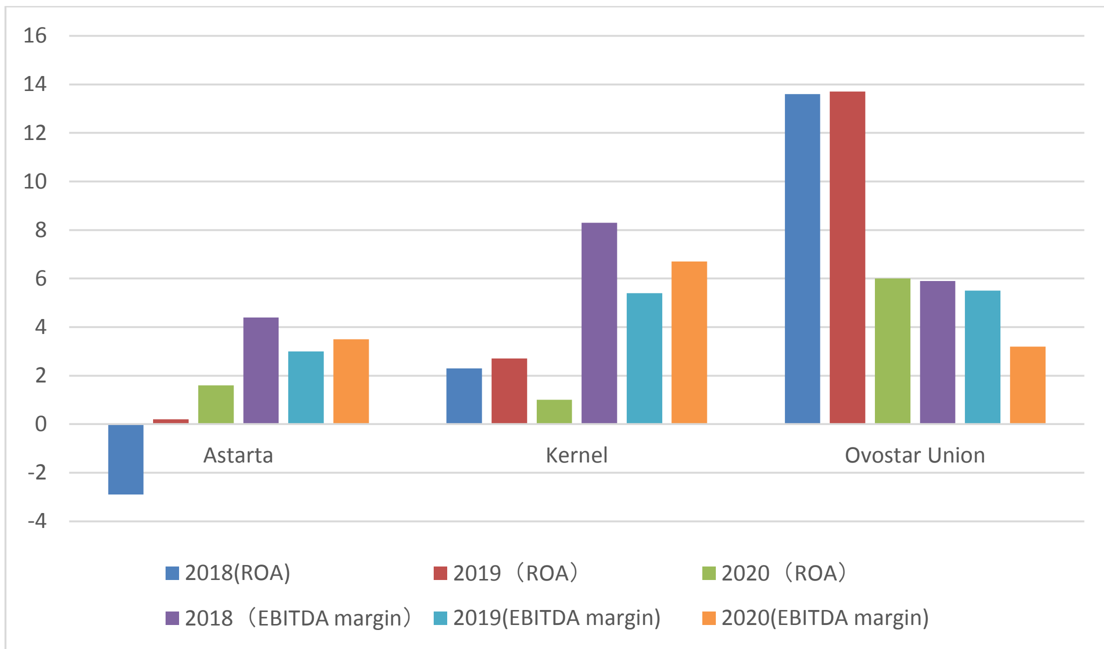

Figure 2.2 ROA&EBITDA margin

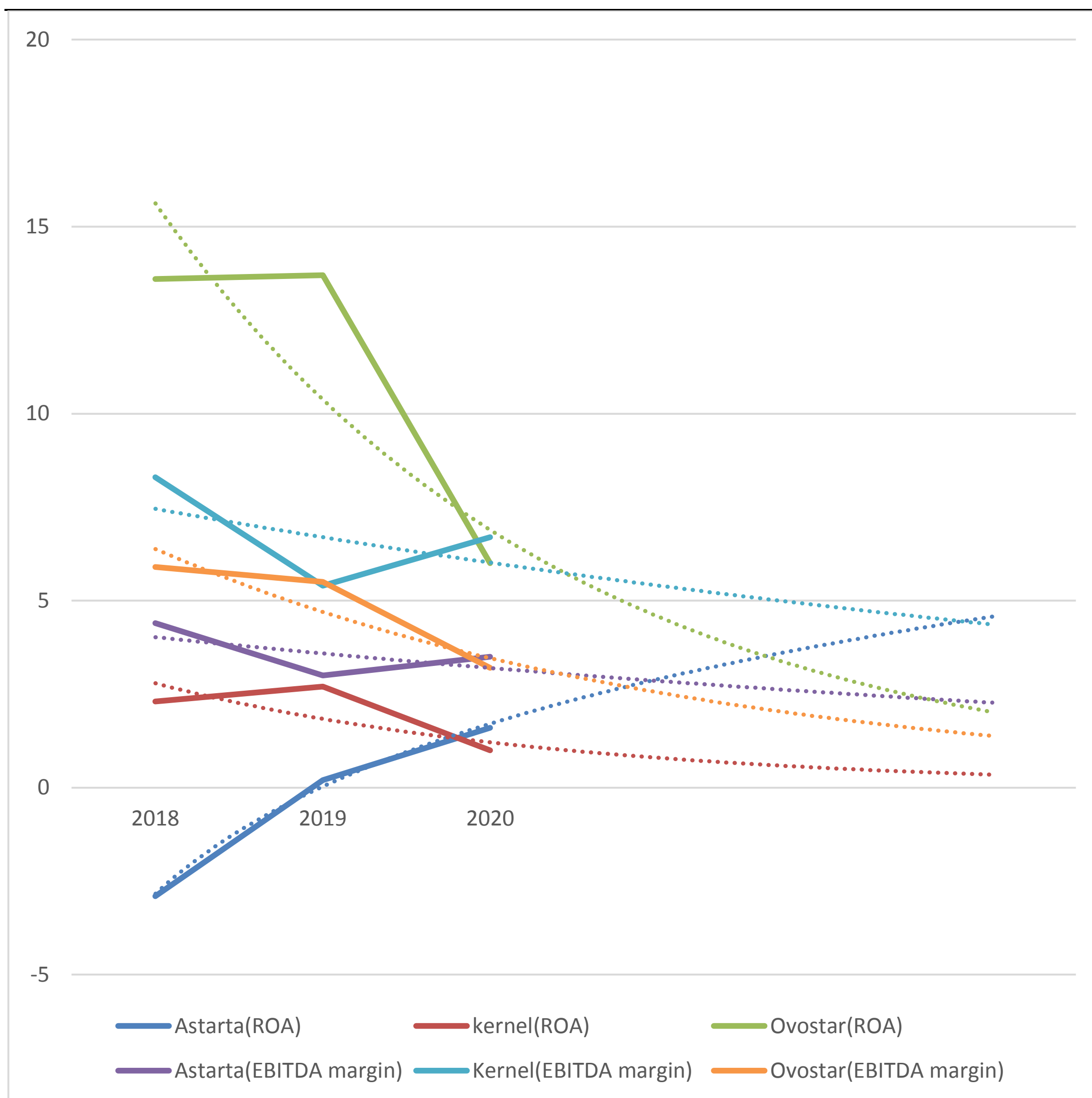

Figure 2.3 ROA&EBTIDA forcast

Corporate profitability indicators such as ROA and EBITDA margins will show different dynamics (Figure 2). The extrapolation trend illustrates this point (Figure 3). The different economic meanings of the indicators are the reason for this phenomenon. Compared with ROE, EBITDA shows the company's financial results, excluding the impact of the company's capital structure, tax rate, and depreciation policy.

Therefore, investors regard EBITDA as the primary indicator of the expected return on their investment. These two indicators are an essential part of the enterprise KPI system.

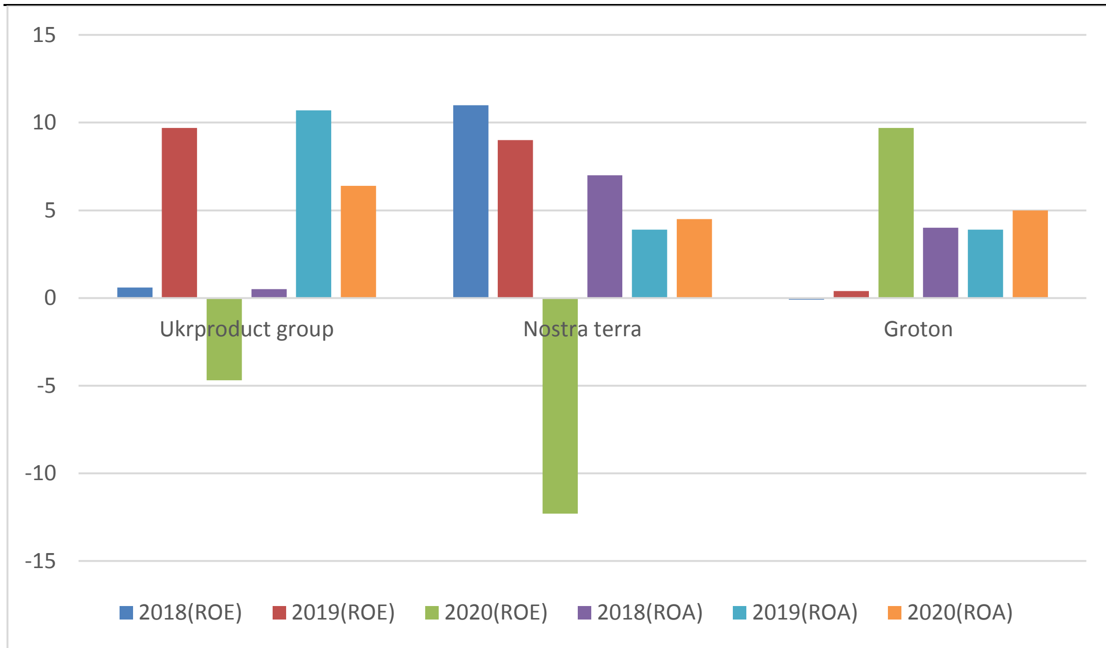

Figure 2.4 ROE&ROA

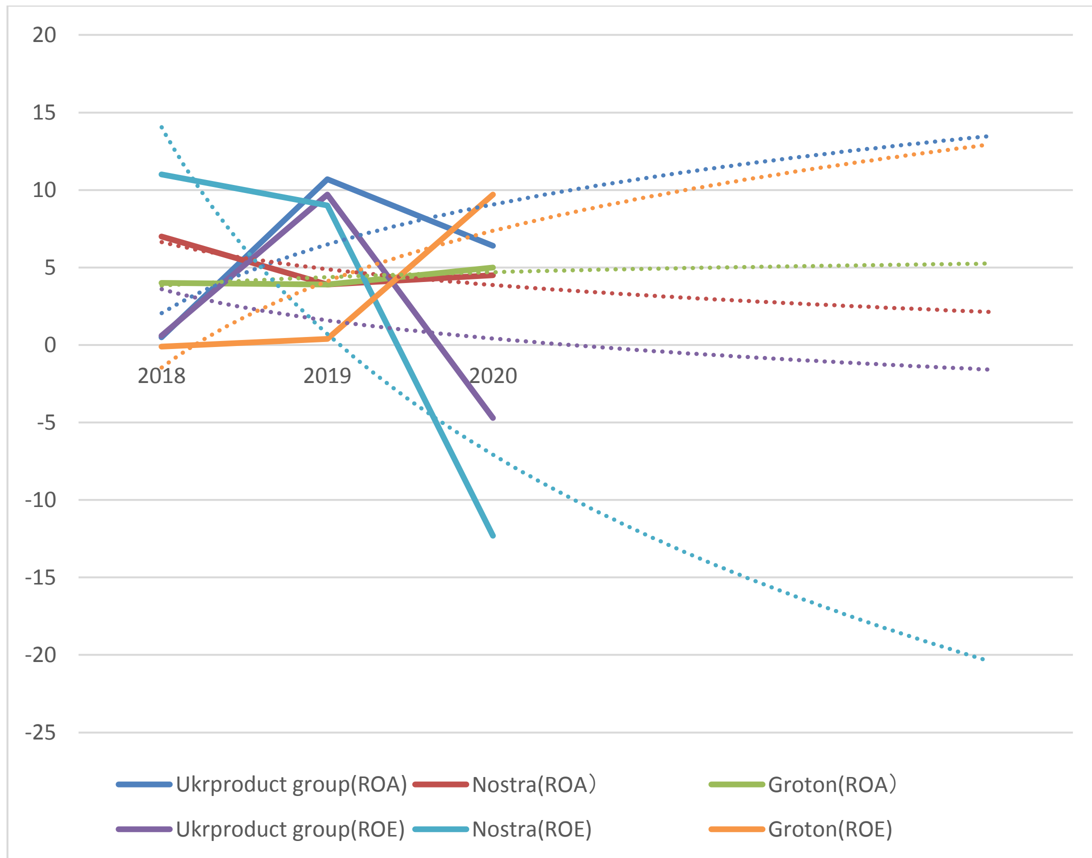

Figure 2.5 ROE&ROA forecast

The analysis shows that the positive dynamics of ROE indicators are more in line with the requirements for companies than ROA (Figure 4 and Figure 5). Therefore, the company strives to create an image effect for shareholders because ROE directly affects its current profitability. However, the increase in ROE is

achievable, and companies can achieve ROE growth by increasing debt. From a strategic point of view, increasing debt to increase ROE growth is detrimental to the company's development.

A low financial gearing ratio (debt/assets ratio) as the indicator of financial stability is a condition for high profitability in the future and vice versa. Notwithstanding, the data in Appendix A indicate that the gas companies Nostra Terra and Cadogan Petroleum and agricultural company MXP worsened the values of this indicator. Moreover, many companies are highly geared (table 2), indicating high financial risks. Therefore, it is no coincidence that, for example, KSG Agro's EBITDA margin values are falling (Figure 4). Based on the above, we can conclude that including the financial gearing ratio in key performance indicators is necessary.

Table 2.3

Highly geared companies.

Groton	Agriculture	67%	74%	89%
Milkiland	Food industry	73%	62%	73%
KSG Agro	Agriculture	69%	82.5%	91.4%
Vestas	Industrial production	73.9%	76.6%	74.1%

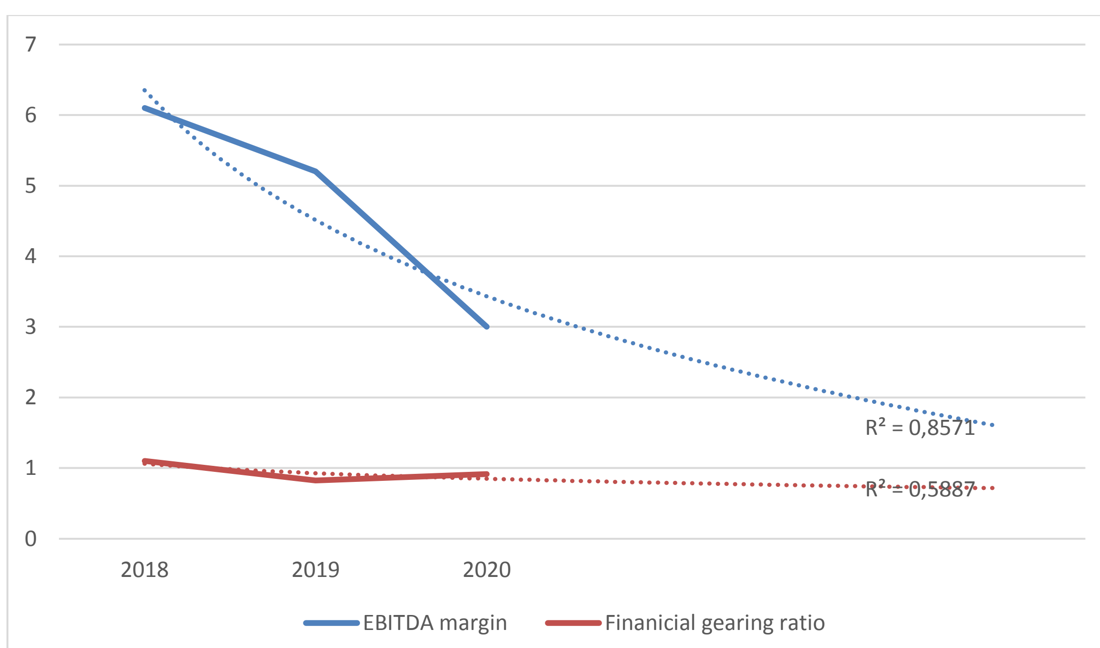

Figure 2.6 EBITDA margin and financial gearing ratio for KSG Agro

It is worth noting that none of the companies in the sample uses the indicators of value-based performance management in economic performance measurement such as economic value added (EVA), marketing value added (EVA), etc. At the same time, these indicators reflect the cost of capital and investment risks. Therefore implementing them in the KPF structure improves management quality and investor awareness.

2.2 Evolution of corporate sustainability practices

When analyzing the KPIs used by companies, it is necessary to pay attention to modern management trends. First of all, this relates to implementing the Sustainability key performance indicators in management. The company's sustainable development means that in the process of the company's pursuit of survival, development, and environmental protection, it is necessary to consider the realization of the company's business objectives and the improvement of the company's market position while maintaining the company's leading competitive field. In order to ensure the company's good and sustainable development in the future, a reasonable KPI system and attention to social responsibility are needed.

The management needs to establish a comprehensive company's sustainable development plan. First, it must analyze the relationship and difference between the growth of some aspects of the company and its development. The development of a company is more manifested in improving the company's overall ability to transform resources and add value. This improvement in capability involves both quantitative and qualitative changes. It is more common in practice that the company's sustainable development is achieved through "adjustment." During the adjustment process, changes in the company's resources, technology, organizational structure, and other factors are guided by improving the company's profitability and the maximization of the company's future benefits. The company's sustainable development should be a "gradual" reform strategy, and this "gradual" strategy has its realistic acceptance and operability in the current company.

Before formulating a development strategy, it is necessary to understand the definition and methods of sustainable development.

- a mindset (i.e., the longevity of a business model),
- an approach (i.e., promote human productivity and satisfaction, a signal to the market or key customers),
- an environmental imperative (e.g., prevent chemical pollution to water bodies and land, reverse climate change),
- a social equity issue (i.e., mitigate negative externalities, halt the export of pollutive practices to developing countries),
- a regulatory mandate (e.g., EHS laws, hazardous waste regulations),
- a strategic, competitive endeavor (e.g., eligibility to SRI and ESG financing, capturing valuable cost-savings)

Through the various above requirements, three essential factors about sustainable development can be drawn. They are environmental factors, social factors, and economic factors.

Environmental and social factors need to be considered. To achieve zero or close to zero carbon emissions is the bottom line of sustainable development. Under this concept, corporate social responsibility (CSR), environment, society, and

governance (ESG) standards are the most commonly used indicators to measure companies.

CSR is the predecessor of ESG. Without corporate social responsibility, there would be no ESG. Corporate social responsibility is a form of self-discipline to ensure that the company's actions positively impact the environment, such as consumers, employees, communities, and the public field.

ESG assumes corporate social responsibility, and on this basis, takes it from the purely charitable field to a set of specific numbers, which allows investors and consumers to understand the company's sense of social responsibility and internal governance practices. ESG indicators include sustainability, ethics, and corporate governance issues. Companies can improve the company's management level by treating employees well and developing effective KPI systems. In environmental protection and community relations, companies also need to demonstrate good social responsibility. The purpose of ESG is to show a good image of the company through non-financial reports.

ESG is an important indicator used by socially conscious investors to identify and use. This indicator can quantify the company's sustainability and social impact. This is fundamental data for investors who care about society and the environment. Based on ESG, investors are concerned about the company's economic status, operations, and impact on the social environment.

Corporate Social Responsibility can be defined as a management philosophy in which a commercial company society that uses resources to make profits returns to the society through charity. Companies will benefit society while enhancing their brands through corporate social responsibility programs, philanthropy, and volunteer work. Furthermore, these recognized ESG standards quantify the company's use and impact on natural resources, human resources, social composition, and an excellent sustainable development strategy.

In principle, investing in ESG as a business is not to make money. The purpose of ESG is to determine that a company's practices put sustainability and ethical principles above profit. As mentioned earlier, ESG is a quantifiable measure of

company sustainability and social impact. As more and more millennial investors choose to support social responsibility, this is a vital indicator. ESG investing is no longer seen as a niche or strategy based solely on personal preferences or beliefs. Many "Traditional" institutional investors are now adopting ESG strategies because they believe it will help them understand the risks of the companies they invest in. If investors can see that the company is performing well and managing risks that may affect resilience, they believe that the risk is low. Companies must also consider the risk of losing investors due to a lack of ESG awareness because consumers are also willing to pay more for sustainable products. Purchasing decisions are increasingly taking into account social issues, which means that companies must not only pay attention to the quality and the cost of their products and services, but also establish sustainable, socially responsible, and environmentally conscious business practices to win and retain customers.

Therefore, the company is beginning to pursue standardization, especially in strategy, finance, and human resources. Managers will formulate the company's sustainable development plan based on these standards. In addition to CSR and ESG, GRI (Global Reporting Initiative) standards are also indispensable in non-financial reporting. Companies can use GRI standards to compare with other competitors. The use of sustainability standards to quantify and demonstrate the company's operating conditions can allow investors to understand the company's operating strategies and sustainable development measures.

This indicator is often affected by external factors. For example, the impact of the COVID-19 pandemic allows companies to reassess almost all aspects of their operations. Therefore, after the pandemic, ESG compliance has been strengthened.

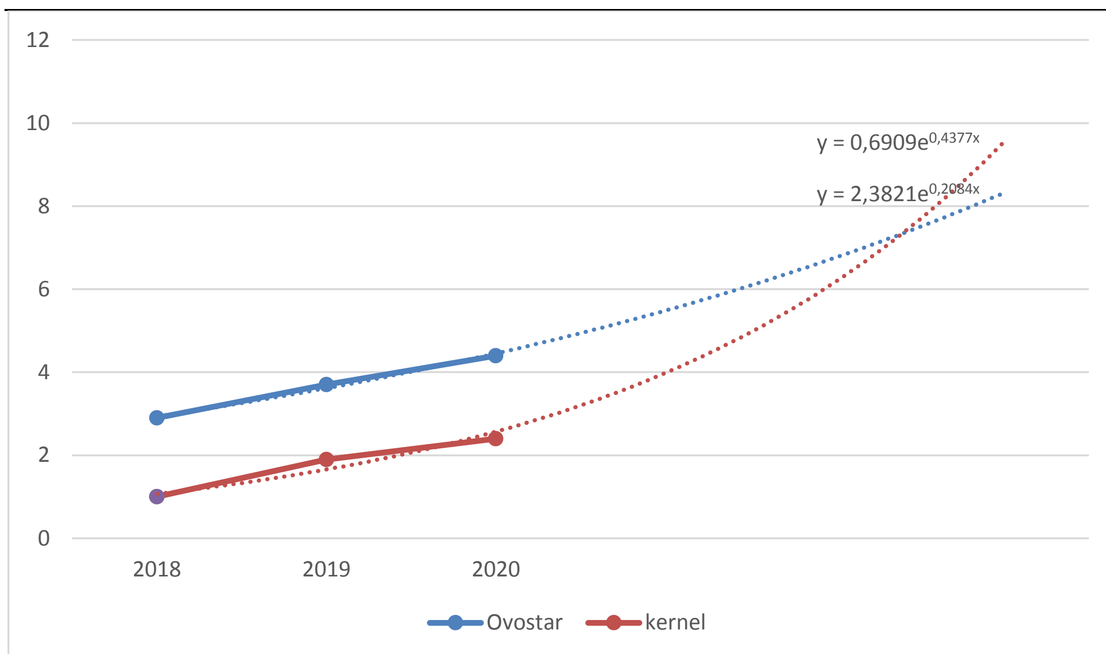

Figure 2.7 External investment

By analyzing the financial reports of Ovostar and kernel companies, they have obtained external investment by introducing continuous training of employees and sustainable management of the operating model. Furthermore, it keeps growing every year. From the figure above, corporate social responsibility can be defined as a management concept.

Commercial companies use resources to profit through positive feedback to society and the environment. It can not only enhance the company's brand but also benefit society.

Corporate social responsibility, initially criticized, will affect the company's efficiency and profitability. At present, more and more companies are beginning to combine CSR with company operations. The integration of CSR into the corporate strategy is to respond to social and environmental commitments and analyze its possible positive impact indicators on financial performance, as it increases the motivation of employees, the ability to attract talents and resources.

CSR indicators can show investors the company's management, competitiveness, or reliability. While making profits, companies must also consider whether their decisions are ethical, meet the standards of all agents interacting with

the company and care about the environment. Modern society pays more attention to corporate CSR. Companies can use this to improve their market image and occupy an advantageous position. Now companies are more and more aware of the need for sustainable development not only from a financial perspective point of view but also from a social and environmental perspective, for which they must formulate positive actions to society, to respect the sustainability of resources and the environment, From this perspective, the purpose is that corporate social responsibility fully responds to the challenges and social needs of stakeholders that affect and are subject to the entity's influence because the sustainability of the company over time depends on it. Finally, we can conclude that the success of corporate social responsibility advocacy organizations depends on their economic benefits, environmental sustainability, and social outcomes.

The concept of CSR has been developed to this day, and it is considered a strategy element, together with the company's other strategies. Its analysis requires comprehensive thinking. Managers considering the complexity of business decisions and various strategies are integrated into long-term sustainable development goals. It is necessary to develop tools that reflect the relationship between different business strategies. It also needs to develop sustainability measures.

The evolution of CSR goals has opened up new research areas, which will provide management tools for the company's sustainable development and promote this scientific field and its practical application in the business world. The company's non-financial investment is quantified under the GRI standard. With the evolution of the company's sustainable development practices, the KPI system, GSR indicators, and GRI standards have become an indispensable part of the company's non-financial reporting. Take on the role of improving corporate image and fulfilling social responsibilities.

2.3 Analysis of non-financial reporting by companies

The non-financial reports of the companies were analyzed based on the theory of the KPI system. The emphasis on non-financial factors (environmental and social ones) affects the company's economic status and development strategy. In order to

better analyze this problem, we selected the non-financial reports of the listed companies. Only five out of fifteen companies submitted non-financial reports. Therefore we analyzed the financial reports of 4 Chinese firms too. The companies and non-financial indicators are presented in table 2.1.

Table.2.4

The non- financial indicators

Company	**Country**	**Industry**	**Non-financial indicators**
1	2	3	4
Astarts	Ukraine	Food Industry	Environmental protection. Green energy, animal protection, employee training, labor rights, community cooperation
CIMA	Ukraine	Accounting Association	employee training, labor rights
INC	Ukraine	Mechanical engineering	employee training, labor rights, community cooperation
Landcom	Ukraine	Land property	employee training, labor rights, Environmental protection, Green energy

The continuation of Table 2.4

1	2	3	4
Vestas	Ukraine	Wind Turbines	employee training, labor rights, Environmental protection, Green energy
NONGFU SPRING	China	Food Industry	employee training, labor rights, Environmental protection.
Haier Electric	China	Household appliances	Environmental protection. employee training, labor rights
Mihoyo	China	Electronic entertainment	employee training, labor rights, community cooperation
Haidilao hot pot	China	Catering Services	employee training, labor rights,

Through the table, it is found that Astart's non-financial report involves the most non-financial indicators. CIMA only focuses on employee training and labor rights. All companies focused on employee training and labor rights. It can be seen that the company attaches great importance to talents. Companies related to energy and industry often attach importance to green energy and environmental protection. This is because of the importance of sustainable development and the establishment of an excellent corporate image. Three of these companies have made investments and explanations in community relations, reflecting the company's emphasis on social responsibility. However, with regard to animal protection, most companies' non-financial financial reports do not involve this aspect. The reason is that different

business environments and development strategies have led to differences in the content of non-financial reports between companies.

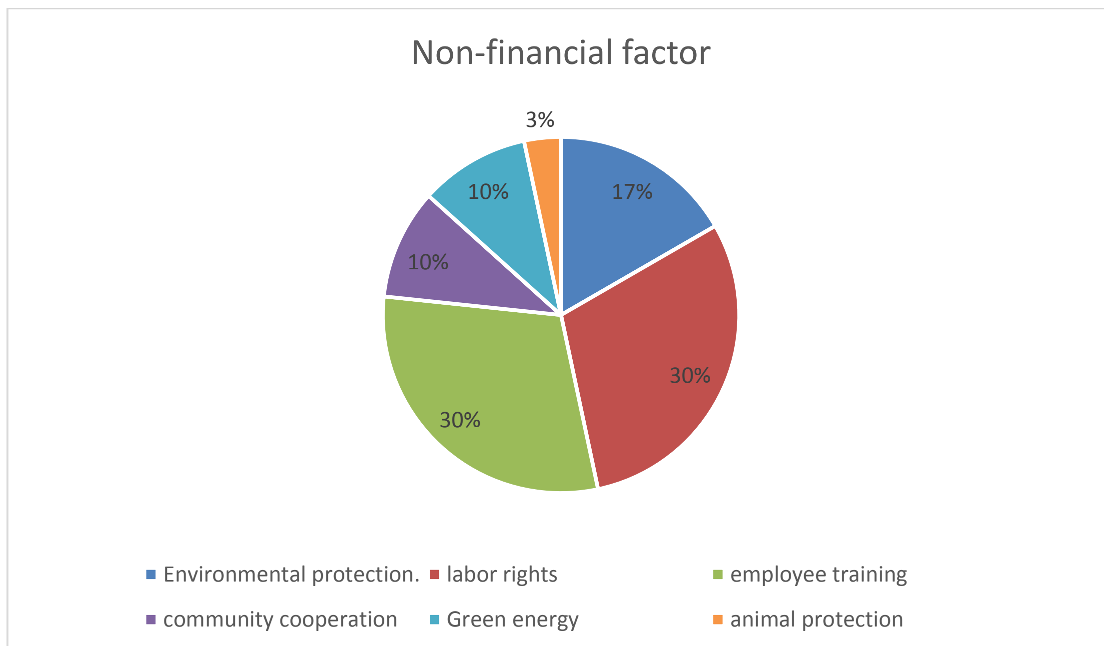

Figure 2.8. Non-financial factor

It can be seen from Figure 8 that most companies include both employee treatment and training in their non-financial reports. These indicators will help the company attract better talents, combined with a specific KPI system can help employees better understand the company's system. In terms of industry and energy, companies tend to focus on green energy or energy conservation. At present, employee training and labor rights are still the mainstream of non-financial reporting. Some companies will pay more attention to the mutually beneficial relationship between the company and society, and these indicators will reflect the company's sense of social responsibility.

A good sense of social responsibility is also a company's competitive advantage. The development of corporate social responsibility has existed for many years. However, many companies still have limitations and misunderstandings about non-financial indicators. They think that corporate social responsibility is a simple cost, an essay on marketing, or a gesture made under social pressure.

Corporate social responsibility can ultimately become a competitive advantage

for corporate development, and its importance is even as important as research and development capabilities or brand value. Excellent companies can take the initiative to start with their own business models or operational advantages, shaping corporate social responsibility into an indispensable competitive advantage for corporate growth, and permeate all aspects of corporate operations. In order to enhance their own social responsibility competitiveness, powerful and forward-looking companies will invest huge sums of money to establish a good social image, create more significant business development space for the company and the industry, and contribute to the progress of the environment and society.

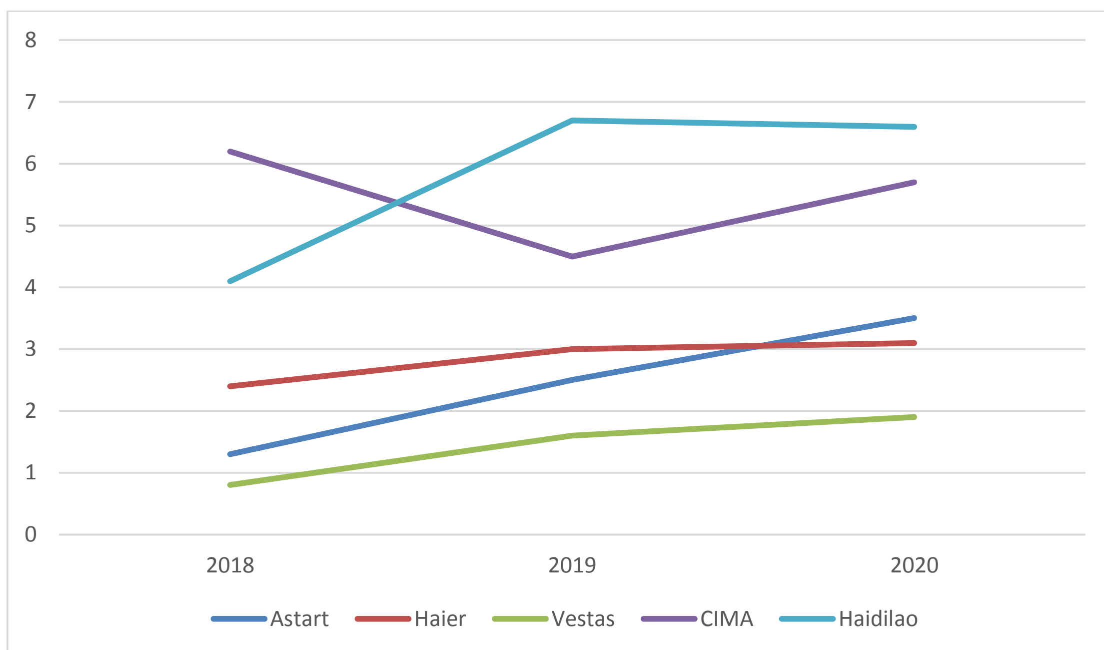

Figure 2.9 Revenue growth ratio

In the management's view, the improvement of non-financial indicators will have a positive impact on the company's development status and financial stability (Figure 9). Therefore, Astart's revenue maintained steady growth. Astart's non-financial reports cover many different non-financial indicators, including environment, workforce, and community relations. This shows that Astart has a good sense of social responsibility, which will have a positive impact on the company's profitability. Today, non-financial reports have become important information for investors to understand the company. Through the combination of financial reports and non-financial reports, it is possible to better reflect the corporate social responsibility and KPI system.

Environmental protection is also the focus of non-financial reporting. However, environmental protection is often regarded as part of social responsibility. On the other hand, the industrial and energy industries pay more attention to environmental protection and energy saving than other industries. Environmental protection should be one of the non-financial factors that modern enterprises need to pay attention to most.

Environmental protection is not only a public welfare issue, but also a social responsibility issue. Promoting the development of green markets and reducing climate change risks are also the main trends in global economic development. The reason why the world's leading companies promise to achieve new sustainable development goals is mainly because they recognize that strengthening environmental protection and reducing climate change risks are necessary conditions for their future development. If you do not seek sustainable solutions from the perspective of economic benefits, it is difficult for companies to participate in environmental protection for a long time, and environmental problems cannot be fundamentally resolved. Only by improving the energy and resource utilization efficiency of enterprises, a lot of costs can be saved. On the other hand, environmental protection can help companies establish a good corporate image and seize new green market opportunities.

In addition, the content of non-financial reports is also affected by the external environment. IMC's non-financial financial report states the company's assistance to employees and the community during the COVID-19 pandemic. Other companies also included their management under the epidemic in their non-financial financial reports. These indicators help enhance the company's image and demonstrate the company's emphasis on human rights and diversified operations. Non-financial reports are often more diversified than financial reports, and companies can use non-financial reports to show internal systems and KPIs. Among them, the KPI system is essential for corporate social responsibility.

By analyzing Vestas' non-financial reports, we can understand the gender ratio of employees in each year (Figure 10). Vestas stated in the report that it will

gradually increase the proportion of female employees to reflect equal treatment to employees. In terms of employee safety. Vestas also showed that the probability of injury is also declining. The company described various current non-financial indicators and set future goals. For example, it will reach 30% of female employees by 2030. This means that non-financial indicators have become an important part of the company's business strategy.

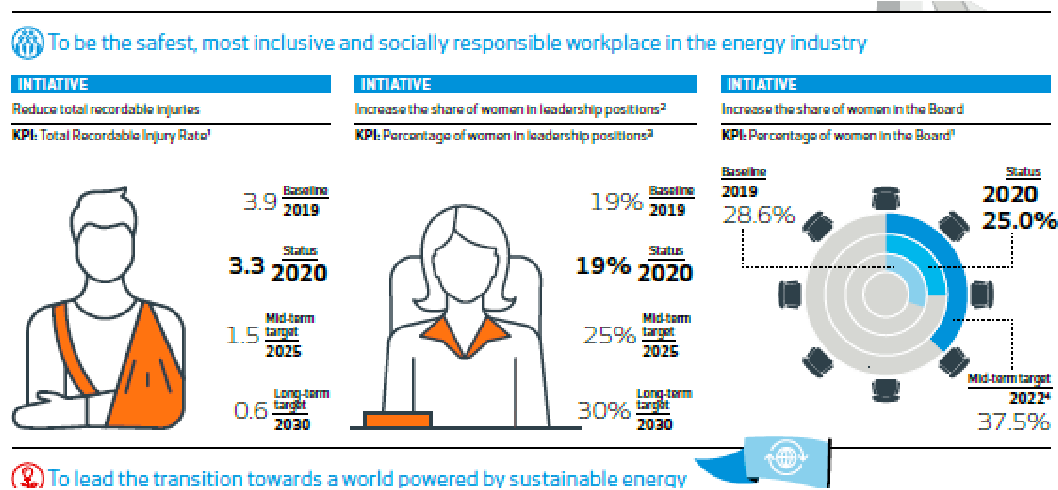

Figure 2.10 Some Vestas' non-financial KPIs

Lancom announced in its non-financial report that it will reduce carbon emissions and help communities reduce energy waste. The company achieves the goal of zero carbon emissions through the reuse of waste and the use of new materials. Like Vestas, it has also formulated future-oriented sustainable development strategies and goals. In addition, Lancom also included leadership goals in non-financial financial reports. By combining with the KPI system, the efficiency of the company's organization and the stability of the supply chain have been improved.

Under the 2020 epidemic, the company began to incorporate anti-epidemic measures into non-financial reports. In IMC's corporate social responsibility report, the company explained that its investment in employee health is increasing and it has developed a health plan for its employees.

The management also incorporates employees' job satisfaction into the KPI system to help improve the work efficiency of grassroots employees. Furthermore, in accordance with the changes in the epidemic, companies formulate appropriate

work plans. In cooperation with the community, IMC has also increased its investment. Especially in terms of health and children's education, these behaviors also have a positive impact on the company's image and development. This shows that non-financial indicators are not fixed, but will change appropriately according to current social trends.

At present, the content of non-financial reports is becoming more comprehensive and diversified. Companies are beginning to pay more attention to social responsibilities in this area. Employee power and training are still the focus of most companies, but investment in the environment and the community is also increasing (Figure 11).

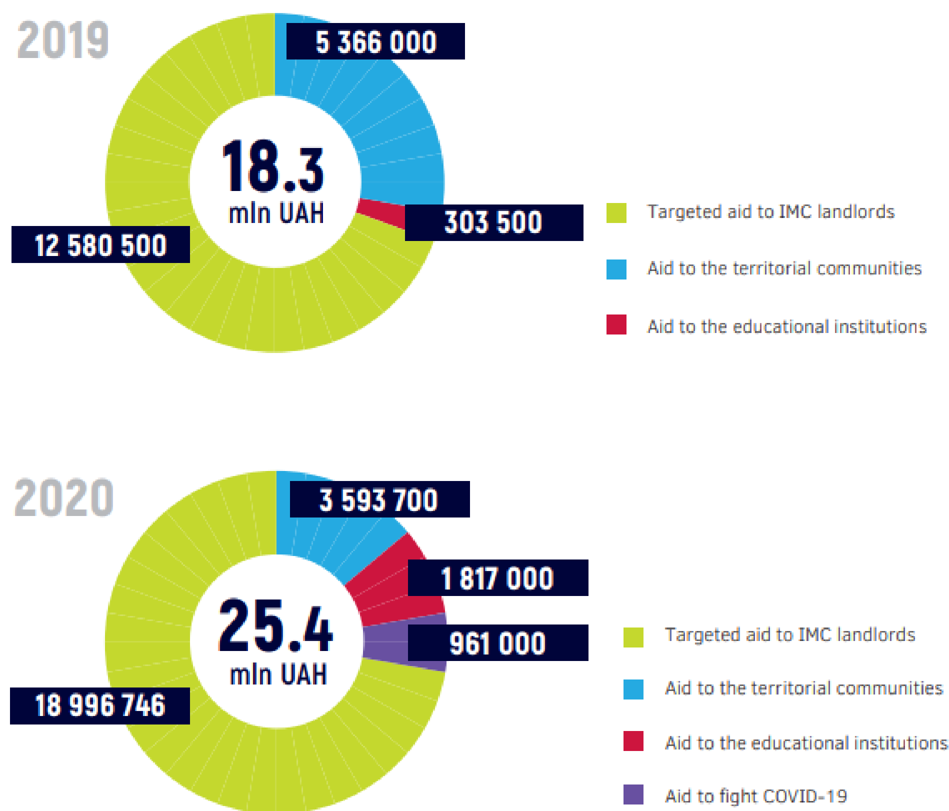

Figure 2.11 IMC investments to the relations with local communities.

As the times change, the content of non-financial reports will become more diversified. Setting appropriate sustainable development strategies based on environmental, social and economic indicators is also essential for non-financial reporting. An excellent KPI system will improve the efficiency of employees. Therefore, the corporate KPI system in non-financial reports is one of the most

important indicators for investors.

SECTION 3. DEVELOPMENT of a KEY PERFORMANCE INDICATORS SYSTEM

3.1 The combined financial and non-financial indicators for corporate performance evaluation.

The traditional enterprise performance evaluation system is based on financial indicators and data. Financial indicators mainly reflect the company's production and operation status and management capabilities through the financial data provided by the company's financial management activities, such as capital use efficiency, corporate solvency, corporate asset management efficiency, corporate profitability, etc.

However, to gain an advantage in market competition, enterprises must continue to innovate in management. The innovation of management methods requires considerable enterprise information support, including financial information, production information, business information, and other aspects. The traditional performance appraisal system is challenging to provide this necessary information. In the context of the information age, the focus of competition among enterprises has shifted from managing tangible assets to developing and utilizing intangible assets.

If the company still only focuses on the figures provided by financial accounting, it will be difficult for the company to gain an advantage in market competition in the future. Financial indicators do not reflect the future value that an enterprise can create but also reflect the company's past performance. Compared with financial indicators, non-financial indicators can better reflect the future information of a company. Non-financial performance indicators such as the company's sustainable development capability, green production capacity, social responsibility capability, and satisfaction of stakeholders provide event information related to the company's performance.

The establishment of a non-financial index evaluation system is helpful to the development of the enterprise and the management. The main advantage of non-financial indicators is explaining or attempting to explain certain relationships or events that are not obvious in the financial statements. For example, from the financial statements (or general accounting information) we cannot understand the relationship between the company and the local community and the protection of the environment, the company's technological development, employee satisfaction, health and safety at work, etc. Financial statements rarely involve competitive advantages and company disadvantages, market share, customer satisfaction, new products, quality control costs, branch development, etc. Financial statements do not show the value of employees themselves, nor do they show their knowledge and skills.

Non-financial indicators are used to make up for the short-term orientation of financial performance indicators, enabling companies to focus on critical factors that promote the company's long-term development. Non-financial indicators such as sustainable innovation and stakeholder satisfaction can better represent the company's future development potential and motivation.

In addition, non-financial indicators can make up for the deficiencies of financial indicators that can only be quantified and more scientifically reflect the intangible assets owned by enterprises. Therefore, the introduction of non-financial indicators can amend and supplement the evaluation results of financial indicators by the external environment from a non-financial perspective.

Although non-financial ratios can be regarded as completed financial ratios, non-financial indicators are not a substitute for financial indicators. Financial and non-financial indicators should be incorporated into a more complete and scientific evaluation system so that investors can have a more comprehensive understanding of corporate performance and provide more information support for management innovation. Incorporating non-financial indicators into the evaluation system can make up for the lack of financial indicators and short-term orientation so that performance evaluation is more scientific and reasonable and the scope of

application is wider.

Non-financial indicators need to fully represent the key aspects that affect organizational performance to contribute to comprehensive and reasonable financial results. Through the comprehensive, comprehensive, and systematic evaluation of the company's performance, the management adopts a comprehensive system to prevent decision-making errors and eliminate certain short-sighted behaviors, urge the company to formulate a comprehensive development strategy from a long-term perspective, promote the establishment of self-motivation and control mechanisms for the company, and promote the company itself. The management and operation method of the company is combined with the market economy.

The combined corporate performance evaluation indicator system logically implies the need for integrated reporting. Although the sustainability report focuses on the company's ESG activities and involves all stakeholders related to the company, the goal of the integrated report is to link this non-financial (or "not yet financial") information with the company's financial performance. Companies can observe actual results through integrated thinking and multi-capital and multi-stakeholder management methods that promote integrated decision-making and action [16.p.89].

It was prevalent when the first framework in the comprehensive report was released in 2013. It is still a voluntary option, although South Africa is the only country that requires companies listed on the Johannesburg Stock Exchange to provide comprehensive reports through applications or explanations.

Approximately 2,000 companies from 70 countries/regions are currently moving to integrated reporting (International Integrated Reporting Committee 2020). Bart et al. (2017) also analyzed the internal impacts related to the integrated reporting tasks of companies listed on the Johannesburg Stock Exchange in South Africa. They found that the comprehensive report shows a positive correlation between quality and future operating cash flows and reduces over-investment and under-investment. Velte (2021) conducted an extensive review and investigation of previous research on integrated reporting. He summarized research covering the impact of joint reporting of financial and non-financial information on company

value. The review revealed that the adoption of integrated reporting and (disclosure) quality is positively correlated with overall performance indicators (such as Tobin's Q, return on assets, return on equity).

The main practical problem is selecting the KPIs and combining financial indicators with non-financial indicators to evaluate corporate performance. As follows from subsection 2.1., KPIs should primarily include the indicators of value-based performance management in economic performance measurement such as Economic value added (EVA), Marketing value added (EVA), etc. An essential part of financial indicators is the financial gearing ratio as well. Besides, practice shows the successful use of such KPIs as Earnings per share (EPS), ROE, ROIC (sum of net profit attributable to shareholders and financial costs, divided by average over the period sum of the debt and equity), Net Income / Invested Capital, Gross margin, EBITDA margin, net debt / EBITDA, Adjusted net debt / EBITDA, EBITDA / Interest.

Non-financial KPIs can be categorized into two groups: the indicators that are not expressed as monetary values and associated with corporate sustainability. Through a series of data collection and processing and; use some unique analysis methods to obtain non-financial indicators. When choosing indicators, it is necessary to consider the industry specifics. It is advisable to use the following indicators that are not expressed as monetary values and determine customer satisfaction: the percentage of interactions resulting in a sale (Completed Sales Transactions divided by Total Interactions), the portion of consumers remaining customers for a given period (Customers Lost in a Reporting Period divided by Number of Customers at its Beginning), the likelihood of customers recommendations of a brand to others, degree of a company's success at meeting customers' satisfaction.

In the management of internal processes, such non-financial indicators can be used as product defect percentage (Number of Defective Units in a Reporting Period divided by (Total Number of Produced Units), the percentage of products delivered according to the schedule, the percentage of projects completed according to the schedule.

For personnel management, it is advisable to apply the following non-financial KPIs: the ratio of wages to the average in the industry, employee productivity rate, high and top performers turnover rates.

The sustainable key performance indicators enable managers to keep track of sustainability progress and potential for future improvement. Hristov & Chirico have systematized the world practice of using sustainable key performance indicators [17.p.89]. They classified them according to three dimensions of sustainable development: environmental, social, and economical. Analysis of non-financial reporting by Ukrainian companies performed in subsection 2.3. made it possible to supplement these KPIs. Table 3.1. presents environmental KPIs.

Table 3.1.

The environmental key performance indicators

Goals	**Ky performance indicators**
1	2
To reduce gas emissions	Emission ofozone-depletingsubstance rate,emission of greenhouse gasesrate,%of emission other, environmentally affecting gases, carbon footprint (Carbon footprint) rate, sulphur dioxides (Soxemissions), nitrogen oxides (NOxemissions), total direct and indirect greenhouse gas emissions by weight, nitric oxide (NO), sulfuric oxide (SO), and other significant air emissions by type and weight

The continuation of Table 3.1

1	2
Improve the use of renewable	% of waste generatedper thousand product unitsdangerous waste generated ratc, % of hazardous material overtotal waste,% of reusable recycled material%of waste recycled offion sitcwaste reduction rate, % of waste reused offion site,%pollution indicators
To reduce natural resources consumption	energy intensity (energyused per thousand product units), electricity consumption(total consumption per thousand products), gas consumption ratesoil use rate, water use rate (totalconsumption of waterand other resources perthousand products), energy consumption, kWh / year, energy saved due to conservation and efficiency improvements,%,Total water discharged by quality and destination,supply Chain Miles
To reduce waste and to improve the efforts to address “green-ness”	renewable energy rate reusable / recycled,material rate, renewable energy rate renewable electric sources rate, sustainable water use rate, percentage of water recycled and reused,% total weight of waste by type and disposal method, waste Reduction Rate, waste Recycling Rate, packaging materials recycling rate, %, risks of environmental legislation violation

It is worth noting that by measuring Supply Chain Miles, KPI, it can become

apparent how far the goods are traveling before reaching the destination incurring carbon footprint along the way. This indicator makes it possible to optimize the supply chain of goods. Table 3.2. presents social key performance indicators.

Table 3.2.

The social key performance indicators

Goals	**Ky performance indicators**
1	2
Employees acceptance of organizational chance	employee satisfaction rate employee turnover rate number of training hours per employee rate of employees that are shareholders support employee rate (physical activity, healthcare, and medicine)
To guarantee the quality of environment and work condition	employment rate intcmal relation ratehealth and safety ratetraining rate diversity rate opportunity rateemployee satisfaction rate total recordable injury rate average hours of training per employee (hours/year)

The continuation of Table 3.2

1	2
To guarantee the respect of human right	equality rate (male to female rate) child labor rate forced labor rate number of disciplinary actions social security rate percentage of women in leadership positions percentage of women in the board minority shareholders rate
To participate at the social initiative and to maintain a high level of responsibility	charity donations rate (community rate) number of social initiatives at national and local level tot expenses for social initiatives % participants in social initiatives consumer, supplier and employees' safety rate

The Ukrainian corporate sector lacks legal protection of minority shareholders' rights and in-depth corporate governance practices [18.p.89]. Discrimination by small and medium shareholders does not contribute to the sustainable development of the economy at the social level and significantly deteriorates the investment environment. The recently revised joint-stock company law (Ukrainian legislation, 2017) is unlikely to help solve this problem. First, this involves the introduction of an extrusion process. These circumstances explain including the indicators of minority shareholders protection rights into the number of social KPIs, namely the indicator of Minority shareholders rate. Table 3.3. presents economic sustainable key performance indicators.

Table 3.3.

Economic sustainable key performance indicators.

Goals	**Ky performance indicators**
1	2
To increase return of investment	cost of ownership linked to: energy,cost consumption environmental tax,growth of gross margin total of costs andinvestments relating to environmental protection environmental costs savings amount of environmental penaltics the economic effect of energy-saving, environmental and social measures
To increase the revenue associated to sustainabilit y dimensions	% of additional revenue % additional price premium brand differentiation %of income from recydling / close loop programs sustainable innovations rate
To enhance technology process	investments in technology rate environmental technology levels% of new environmentally sound product development response to environmental product requests rate response to environmental programs rate (for suppliers) amount of environmentally safe alternatives labour productivity (Revenue / Average No. of Employees)
To grantee quality of the processes	of production sites with environmental certification (ISO9001,ISO14001,1SO50001,UNE 166002 and OHSAS 18001) environmental information accuracy rate environmental information availability rate supplier rejection rate

It should be mentioned that such economic sustainable key performance indicators as The economic effect of energy-saving, environmental and social measures, and Labour productivity (Revenue / Average No. of Employees) are of practical importance regardless of the industry sector of the enterprise. Even though these indicators are not expressed as monetary values, they refer to non-financial ones because of their connection with corporate sustainability.

3.2. Development of a Sustainability balanced scorecard (SBSC)

In recent years, global discussions on incorporating sustainability at the business level have become mainstream. The Sustainability Balanced Scorecard concept (SBSC) makes it possible to form and apply the KPIs system consistent with the objectives of corporate sustainability management. SBSC is linked to sustainability, and management can integrate it with organizational performance. SBSC is a balanced scorecard specifically used to reflect the issues and goals of the company's sustainable Development.

Speaking of the sustainable management scorecard system, we describe a sustainable strategy's classic strategic scorecard (BSC). The matter is that although BSC has advantages, it was evident that its internal system combination of financial goals, indicators, goals and initiatives, internal processes, customer relationships, and long-term growth infrastructure standards of excellence is not sufficient for companies to formulate and manage sustainable development strategies. For this reason, it is necessary to combine the traditional BSC with the corporate sustainable development system.

Although the principles of SBSC did not begin to be widely discussed until the beginning of the 21st century, the work of T. Becker, M. Bonacci, and T. van den Brink have formed some methodological methods for constructing them, W. Waxenberger, F. van der Vuyd, T. Dillick, M. Epstein, L. Rinaldi, F. Figge, J. Hubbard, AT Cialis, L. Schaltegger and other scientists [379-389].

The work of these authors confirms the following method variants for turning BSC into a balanced sustainability indicator system. First of all, it is to incorporate the

company's most important environmental and social standards into the four standard components of the BSC or only include some standard components that are more closely related to its sustainable development.

Sands et al. [19.p.89]. Assimilated the social, environmental, and innovation processes from the four BSC perspectives and found several positive influences between and within the four SBSC perspectives that are worth noting Direct or indirect relationship. They suggest that managers should provide sufficient authority for internal process adjustments, and make a positive commitment to their organization, in addition to conducting appropriate training on specific issues that affect performance and make employee performance processes related to key achievements in a clear way stand up.

Nevertheless, Jasim et al. [20.p.89] acknowledged that the relevant aspects that constitute SBSC and the methods to achieve these aspects are still unclear. The way companies manage environmental issues may require appropriate strategies that can be applied every day. Therefore, it makes sense to incorporate environmental and green strategies into the traditional BSC perspective. If the output of a given amount of natural resources can be increased, or if the same output can be achieved by consuming fewer natural resources, the production process will become more environmentally friendly [21.p.89] These measures will affect internal processes and financial aspects. The future economic situation of enterprises will be affected by profitability, competitiveness, market and products, and reputation- these factors are affected by environmental issues; stakeholders and customers may even explicitly ask them to consider these indicators. [22.p.89] Therefore, companies need to consider these aspects from the perspective of finance and customers.

Since this usually also requires training and learning for managers and employees, views related to learning and growth will also be directly affected. Therefore, incorporating environmental issues into the company's four traditional BSC views will lead to positive financial results and a better corporate reputation. Hansen and Schaltegger [23.p.89] believe that introducing social issues into the traditional BSC perspective can help companies make reasonable decisions

regarding competition, efficiency, technological upgrading and adaptation, market and ecological conditions, and this measure can affect companies Development status.

This integration has some positive features. First of all, r From the customer's perspective, the relationship between customer needs and organizational participation can increase customer value and organizational results (Sands et al., 2016), which helps to achieve society's expectations of the enterprise and organizational legitimacy [23.p.89]

From the perspective of learning and growth, social integration helps the company achieve social responsibility results, including employee learning and achievements, employee ownership of their development, and respect for employee safety. [21.p.89]

Similarly, companies can modify certain aspects of social responsibility through internal processes [21.p.89], leading to similar performance results. Therefore, it may be necessary for the company to adjust its activities according to customers' needs. This may require specific employee training programs to enable managers and employees to apply their knowledge in business activities.

In the case of integrating some of the options, the sustainability standard was first added to the two components of the BSC, namely "internal business processes" and "customers." This methodology has significant advantages because it allows maintaining the orientation of the management system to achieve strategic financial performance while ensuring the company's long-term stability by preventing environmental and social issues from affecting the financial plane [24.p.89]

Not all standards used in the international non-financial reporting system can be integrated into the classic components of the BSC. These company activities are not expressed in financial terms, are not suitable for marketing strategies, and are usually beyond market relations. This applies in particular to compliance with human rights in the company's business activities. Therefore, reporting indicators in the GRI system include "the percentage and the total number of important investment agreements, including human rights clauses or human rights

assessments" (HR 1) and "total number of discrimination cases and Action taken" (HR 4).

With this in mind, the second methodological approach for constructing SBSC involves supplementing the balanced scoring system with the fifth component, which demonstrates the sustainable Development of the enterprise in economic, environmental, and social aspects.

The non-market perspective is called the fifth perspective method and the sustainability perspective [25.p.89]. Establishing a sustainable development perspective will help the company's strategy effectively implement. The non-market perspective is concerned with expanding the traditional four perspectives of BSC, but a single sustainability perspective allows a comprehensive evaluation of sustainability.

The non-market perspective allows companies to treat environmental and social issues as amendments and supplements to other aspects, integrate them as personal goals, and deal with them as a whole. In addition, it contains four other perspectives and company performance that are affected by the external market system. For example, incorporating social aspects into BSC, Lu et al. (Lu et al., 2018) published the following conclusions: increase employee satisfaction, increase efficiency, improve image and reputation, healthier stakeholder relationships as the output of sustainable performance upgrades, and cultivate awareness of areas that need to be developed Possibility.

On the other hand, Jassem et al. [26.p.89] Incorporating the ecological perspective into the old-fashioned BSC, it is found that the combination of ecological efficiency and SBSC information influences ecological investment decisions. Finally, the sustainability perspective emphasizes the importance of all social, environmental, and economic responsibilities as company goals [25.p.89]. From this perspective, the sustainability point of view seems to be the most flexible approach for SBSC because it can evaluate and deal with all aspects of sustainability individually.

However, the mechanical connection of this component breaks the logic of the

relationship within the BSC system. This conclusion is not only due to the existence of the standards as mentioned above for non-market activities, but mainly due to the contradiction between the formation of two strategic objectives, one based on optimization of financial indicators and the other based on optimization of financial indicators. Others focus on economic, environmental, and social aspects of economic proportionality. Equally important, the company's environmental and social goals, goals, and initiatives are usually generated by company policies to meet the needs of customers and employees and the strategic needs of developing internal business processes.

Therefore, the SBSC model is developed based on the comprehensive application of two principles: integrating all aspects of corporate sustainability that determine the organization's financial perspective into the existing components of the balanced scorecard and integrating other aspects Into a separate fifth part. Therefore, the company will not lose its strategic focus on achieving specific financial results in terms of governance. On the other hand, it can extend its inherent methods and tools to all social activities and use international non-governmental organizations to measure its financial Report.

However, it should be pointed out that in the third SBSC model, the sustainable development part is not linked to other parts through a systematic relationship. The methodology used to establish a balanced sustainability indicator system in the UK under the SIGMA project (SIGMA Sustainability Scorecard) is based on two basic principles: the sustainability goals take precedence over pure financial goals, and the company focuses on satisfying stakeholders Demand, not just consumers and suppliers (SIGMA Guidelines, 2003). According to these principles, in the SIGMA model, the classic financial perspective of BSC is replaced by the corporate sustainability perspective, and the customer component is transformed into a relationship block with external stakeholders. The formation of the concept of sustainable development lies in answering the following questions: "How do we understand the success of our organization's sustainable development and its purpose? Which standards of corporate social, economic, and environmental activities align

with the organization's values, vision, and mission?

The model's strategic standards of business activities are inconsistent with the economic indicators in non-financial reports. Therefore, the return on invested capital (ROI) is used as a deferral indicator. Corporate environmental performance is evaluated through the efficiency of energy-saving technologies, which determines the number of greenhouse gases emitted into the atmosphere. The level of energy consumption is considered a delay indicator, and measures to increase it are considered early. They have stimulated the introduction of energy-saving technologies under the EU's operating mechanism conditions and contributed to the long-term growth of investment returns. Therefore, changing the BSC's financial perspective to a sustainable development perspective according to the SIGMA methodology has hardly changed the core role of strategic financial goals and has increased the entity's task of corporate management of environmental and social issues. Note that the relationship between social and financial standards is not always apparent. This largely depends on the influence of stakeholders. The goals, objectives, indicators, and initiatives of stakeholders and related departments are based on the answers to the following questions: "What responsibilities does the organization have to stakeholders? Furthermore, how should it interact with them to achieve the sustainable development goals?". Similarly, other components of the SBSC SIGMA model have refocused on sustainable development goals and collaborative relationships with stakeholders.

T. van den Brink and F. van der Vuyd, the authors of the RBS (Responsive Business Scorecard) model, supplemented the traditional BSS with a fifth perspective, "people and the earth," to integrate interests, which is the best level for corporate financial, environmental and social goals. Stakeholders in the company's strategic decision-making system [27.p.89]. They believe that in the RBS format, this view should be equivalent to focusing on profit maximization[27.p.89]. However, the Royal Bank of Scotland authors agreed that this only applies to "ambitious companies." Obviously, outside the mature institutional environment, adopting this multi-purpose method to determine the development strategy may

deteriorate the enterprise's financial status due to the implementation of economically inefficient environmental or social measures.

Joseph Firestone tried to reconsider the concept of BSC based on the structure of the enterprise's development prospects based on the type of process (operations, innovation, information) and its results (Firestone, 2006). Firestone's model was adapted by H. Hudders (Hudders, 2012) to adapt to sustainable corporate development. In addition to the financial perspective, it also fundamentally changed the classic perspective of BSS, adding environmental, social, and economic elements, which in turn focused on external and internal stakeholders. Please note that the added components are explained in the context of international non-financial reporting (GRI). Therefore, this model's economic and financial outlook has not been determined. From the perspective of practical applications, a multi-functional, multi-purpose, and correspondingly complex Hades system requires sufficient mechanisms to determine the strategic balance, which cannot be universal.

M. Bonacci and L. Rinaldi chose a fundamentally different corporate-level sustainable development strategy management method [28.p.90]. Without denying the importance of a comprehensive strategic vision of the company's financial goals, customer relationships, improving internal business processes, and employee development, they focus on the methodological aspects of managing the company's balanced economic, environmental, and social development. M. Bonacci and L. Rinaldi based on the graphical model proposed by the following paper: "Development is considered sustainable only when improvements in any one of these factors do not worsen the indicators achieved in the other two directions. "[28.p.90]. The model provides a two-step process for analyzing the company's stability factors. The first step is to identify economic, environmental, and social activities in which changes to meet stakeholders' interests have been achieved, and vice versa. Their assessment is by comparing the results achieved with the target values set by the strategic plan and as stipulated by the minimum requirements of the current legislation. The second step analyzes the relationship between strategic decisions in each development area and stakeholders' interests.

The various configurations of the sustainable development balance indicator system objectively raise the standard issue of selecting the best option. T. Becker et al. It confirms the connection between the SBS type and the following corporate sustainable development strategies: buffers, costs, differentiation strategies, and sustainable market development [29.p.90]. In their view, the application of these strategies is determined by specific characteristics of the market environment and the level of sustainable development achieved by the company. When a company faces new environmental or social requirements from laws and stakeholders, it will need to implement a buffer strategy, ignoring the inability to maintain its market share. The cost strategy aims to achieve maximum financial results by introducing modern energy-saving technologies, minimizing waste generation, and improving corporate social standards. If the company's environmental and social goals can be achieved cost-effectively, it shows that this approach is appropriate. In some mature markets, where competition is high and commodities are interchangeable, it is recommended to adopt a differentiation strategy, that is, to use specific environmental characteristics of products or corporate social measures as a competitive advantage. This strategy has recently been used in agricultural markets in developed countries. Very popular, in these countries, manufacturers who position marketing as environmentally friendly products provide significant economic benefits. An example of a social initiative is the development of new cosmetics without animal testing.

These strategic provisions partially integrate certain aspects of sustainable Development into the traditional view of BSS. A fundamentally different approach to establishing SBSC is implementing sustainable market development strategies. It includes an additional fifth perspective that reflects its environmental and social aspects. This is because the strategy is chosen by industry or regional leaders in the company's sustainable development and aims to expand existing markets or create new markets for environmental products and products produced in a socially responsible manner. Such a decision becomes necessary at a particular stage of green production and raising social standards. When the facts prove that the further

development of enterprises in this dimension, within the existing market and its priorities and needs, it loses its attractiveness from a financial point of view. Force. Then, to improve the cost-effectiveness of the expertise accumulated in the company's sustainable development, leaders formulate strategies that affect consumers, the business environment, industry standards, and even the legal framework, aiming to strengthen producers' requirements for social responsibility. The Demand for their goods, jobs, and services continues to increase.

Based on the above, we can conclude the expediency of the following transformations of the balanced indicators classical system (BSC) into the Sustainable Balanced Scorecards (SBSC) (Figure 3.1.). First of all, the company's vision and strategy are changing. They focus on the Balanced Development of the company in economic, social, and environmental dimensions. Financial indicators must reflect the growth of equity capital in the long term based on rising corporate environmental and social standards.

Customer Perspective is expanding to include all the stakeholders of the enterprise. Corporate sustainability becomes the goal of improving internal business processes. Innovation and Learning Perspective becomes larger, gradually transforming into Corporate Social Perspective.

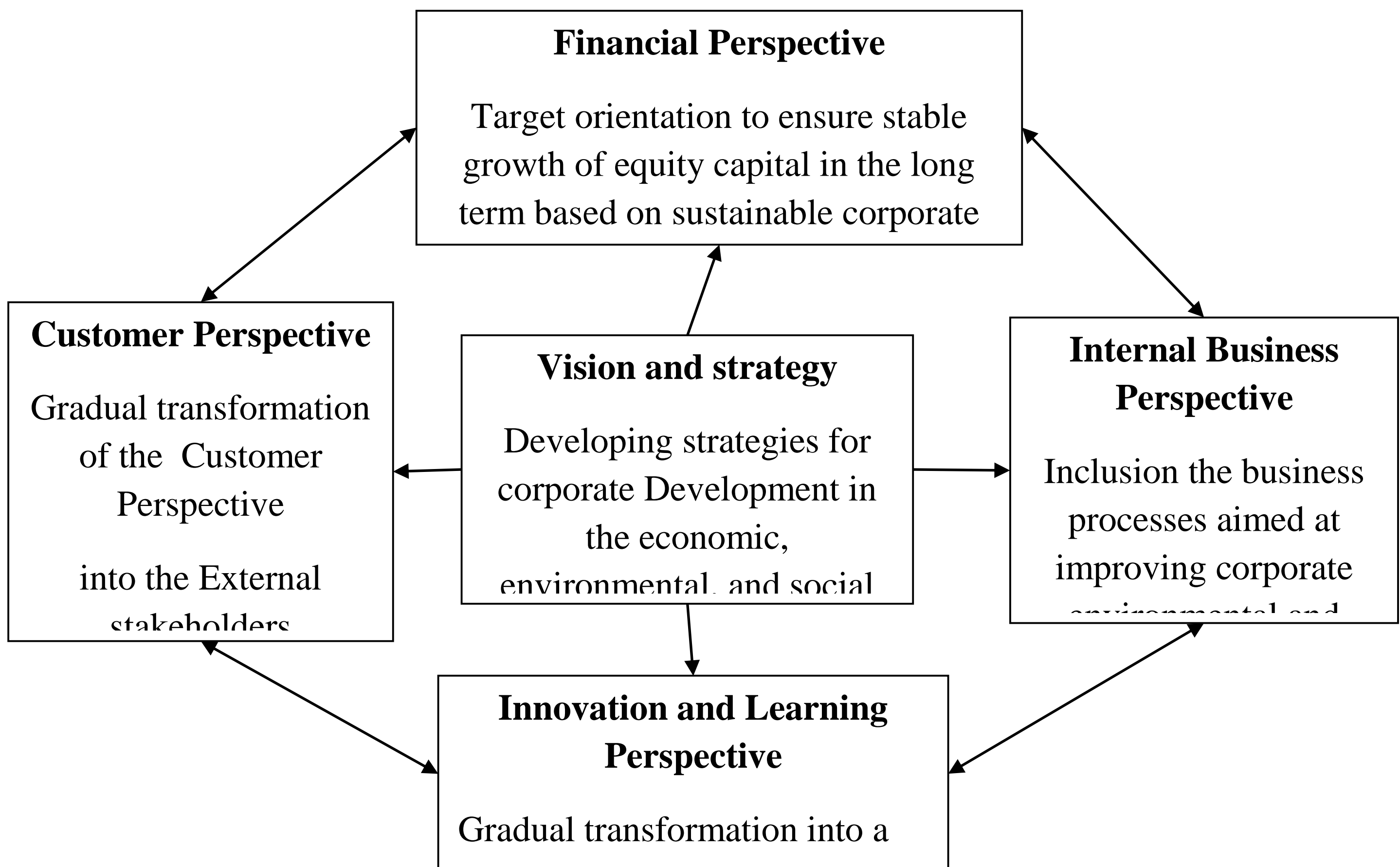

Figure 3.1. The main transformations of the classical BSC into the Sustainable Balanced Scorecards

The prerequisites for the implementation of Sustainable Balanced Scorecards at Ukrainian enterprises is the approximation of economic conditions to those existing in the countries of the European Union. For this, it is necessary to carry out environmental labor tax reform, introduce a greenhouse gas emissions trading system, and the Carbon Border Adjustment Mechanism.

3.3Implementation of the key performance indicators in the management of strategic, tactical, and operational goals.

Implementing KPIs to incorporate practice brings many challenges, and the way KPIs are used is often not the most effective. First of all, the reason is to use the

same key performance indicators to achieve the strategic, tactical, and operational goals. Generally, KPIs are only seen as a tool to measure performance at the operational level. This approach ignores that KPIs can benefit strategic planning and strategy implementation.

There is no doubt that a company has to use KPIs to Measure operational goals, that is, monitor the delivery of internal operations daily. However, a company needs also to measure strategic and tactical objectives, that is, monitoring where it is now concerning to where it wants to be in the future (in 3-5 years and one year respectively). In other words, the operational KPIs help to measure the short-term performance of a company, Strategic KPIs help measure the implementation of long-term strategies. For some operational KPIs, especially in the production process, data needs to be captured and monitored in real-time. For strategic KPIs, it is sufficient to maintain a monthly or quarterly data collection and monitoring frequency. These activities are not the same, requiring different types of KPIs. In practice, the difference between strategic KPIs and operational KPIs is often overlooked.

Key performance indicators are essential success factors for strategy implementation. In order to achieve the desired state, companies need to set strategic goals to transform strategy into action. In strategic planning, KPIs can be directly linked to the realization of strategic goals. A company's strategy is how it strives to achieve its long-term vision. Use performance indicators as key standards to ensure KPIs and strategic goals consistency.

Companies need to regularly monitor the achievement of strategic goals to understand whether the company's strategy is proceeding smoothly. KPIs provide evidence of the extent to which strategic objectives have been achieved. This way, KPIs can be used as an early warning system for strategic issues. The company does not need to monitor the progress of strategic measures daily. Strategic KPIs are more about monitoring progress or trends towards established goals because strategies should not change too much, nor should the KPIs used to measure progress towards established goals change too much. It will be more critical to monitor KPIs over time

so that management can accurately understand the progress. If the deviation between the measured and target performance is at a significant level, it is time for the company to reconsider, analyze the cause, and take action.

The main strategic KPIs are suggested and described in subsection 3.1. It is noteworthy to underscore the expediency of management orientation on the indicators of value-based performance management such as Economic value added (EVA) or SVA EBO, CFROI, CVA, MVA. For achieving corporate sustainability, the system of key performance indicators has to include the sustainable KPIs (economic, social, and environmental), in particular, such as The economic effect of energy-saving, environmental and social measures, Employee satisfaction rate, Percentage of women in leadership positions, Minority shareholders rate, Risks of environmental legislation violation, Greenhouse gas emissions (Kg CO2 /MW), Emissions of pollutants to water bodies (m3), Sustainable innovations rate, etc.

The KPIs system can be supplemented with strategic and tactical indicators proposed by Baba et al. [30.p.89]. They are also categorized into economic, social, and environmental indicators. Economic factors of sustainable key performance indicators, for example, reflect cost-effectiveness and quality.

Manufacturing and distribution budgets belong to the strategic KPIs, describing cost-effectiveness. They are complemented by tactical indicators of operational, capital, raw material labor, transportation, handling, storage, transactions, and delivery costs. Among quality, KPIs are strategic indicators of product reliability and safety and tactical, such as traceability, working condition, the ratio of actual product composition, and description.

Baba et al. have also proposed some engaging and effective social and tactical KPIs, in a particular percentage of contracts with provincial suppliers, following guidelines for Good Manufacturing practices, customer loyalty, green packaging, and improved compliance with environmental standards.

Companies must keep strategic KPIs relevant to their strategy implementation, ensuring that they are relevant and closely related to specific strategic objectives. Enterprises can improve the effectiveness of KPIs by integrating KPIs into the

corporate strategic management framework. One of the most popular frameworks is the Sustainability Balanced Scorecard.

The Sustainability Balanced Scorecard concept makes it possible to form and apply the KPIs system consistent with the objectives of corporate sustainability management. A variant of combining strategic goals and sustainability key performance indicators is shown in the table3.4.

Table3.4.

Strategic goals and sustainability KPIs in the SBSC framework

Strategic goals	**KPIs**
1	2
Financial Perspective 1. Ensure stable long-term growth of the firm value by introducing energy-saving, environmental and social measures.	1. SVA (or EBO, CFROI, CVA, EVA, MVA) 2. The economic effect of energy-saving, environmental and social measures.
External Stakeholders Perspective 1. Comply with the interests of consumers and suppliers, local communities and environmental organizations.	1. Market share 2. Risks of environmental legislation violation.
Internal Business Perspective 1. Ensure environmental friendliness of technological processes. 2. Ensure productivity at the level of industry leaders based on the introduction of modern technologies.	1. Greenhouse gas emissions (Kg CO2 /MW) 2. Emissions of pollutants to water bodies (m3) 3. Labor productivity (Revenue / Average No. of Employees
Corporate Social Perspective 1. Ensure staff mastery of new business processes. 2. Satisfy the interests of minority shareholders.	1 Average hours of training per employee (hours/year) 2. Stock price growth.

The relationship between delayed and leading indicators balances long-term and short-term SBSC goals. It is worth noting that the financial KPIs that take into account investment risks determine its strategic objective. Thus, the KPI system in the SBSC framework provides corporate sustainability management in the existing

business environment.

Strategic goals can be further subdivided into operational goals. Operational KPIs can help management determine which operating strategies are practical and hindering the company's development. These indicators strive to get closer and closer to "real-time" measurement, so managers can evaluate what is happening in the business hourly, daily, weekly, and monthly. These insights help employees make their business better. They provide essential information about where systems, processes, or people are falling behind or deviating so that they can quickly take corrective actions to solve problems before they escalate into full-scale problems. Strategic measurement does not require such real-time performance monitoring.

Selecting the operating KPIs is essential. Although operations managers and operations departments usually care about improving the efficiency of daily operations, employees' efforts are often directly reflected in financial performance indicators. The following financial, operational KPIs have shown practical importance: Operating cash flow, Operating and net profit margins, Quick ratio, Accounts receivables turnover**,** Cash conversion cycle**,** Accounts payable turnover, Days sales outstanding, and Costs of shipments.

Operating cash flow is affected by the cash flow generated by the company's day-to-day operations. Net profit margin is the bottom line of the income statement. After subtracting all costs, it shows how much money a company makes and compares it to revenues. This is probably one of the most important metrics that operations managers use to determine a company's financial health. Operating margin is a better indicator of a company's profitability because it considers operating costs.

The quick ratio is a financial metric that any operations manager should know. It is used to quickly check a company's financial health and determine its immediate ability to repay short-term liabilities. Accounts receivable turnover measures a company's ability to collect accounts receivables. Finance and operations managers often use this indicator as a leading indicator of market conditions.

Most operations managers track the cash conversion cycle metric because it

shows how long it takes a company to convert its inventory investments from sold inventory to cash. This KPI consists of three other KPIs: days of unprocessed inventory, days of unprocessed sales, and days of unprocessed payables. Accounts payable turnover tracks the number of times a company has paid its accounts payable during a specific period. The higher the number, the more timely the company repays its debts.

When managers need to drill down into accounts receivable to find out which customers are not paying their bills, they track metrics for days of sales outstanding. This metric tracks the average number of days a customer pays after a purchase. This metric is used to determine customers' quality and helps determine which customers the company wants to continue doing business with in the future.

Another equally important factor is the company's workforce. Employees are the backbone of a company. It is essential to understand the mood of employees and their performance. Here are some employee KPIs for operations managers: Employee satisfaction, employee turnover, response to job openings, overtime.

Such operational indicators as employee satisfaction, employee turnover rate coincide with the strategic ones. It's impossible to make every employee happy all the time, but employees need to fill out surveys and express what they like and dislike about their work. This is essential information for hr and operations departments. The rate of employee turnover fluctuates from industry to industry and even from company to company within the same industry. However, it is essential to understand why employees need to be replaced at the end of the day. This operational measure is usually best analyzed with an employee satisfaction KPI.

The response indicator to a job vacancy is to assess how exposed the job Posting is to the target audience. It measures this by comparing the number of qualified applicants to the total number of applicants. Working overtime can be a good thing because it means higher pay, while for others it may simply mean working more hours at the same wage rate. This operational performance indicator is worth tracking to determine who may be overworked or make up for their colleagues.

Every company must use marketing operational KPIs. These include return on

AD spend, lead conversion rate, cost per acquisition, percentage of customers derived from marketing. Most companies rely on large marketing budgets to increase market share or raise brand awareness. Return on advertising Expenditures Compares revenue to marketing expenditures to measure the effectiveness of the Marketing Department.

Lead conversion Rate Track how many leads convert to paying customers so you can see the effectiveness of your channel. Cost per acquisition shows how many new customers the campaign has acquired and at what cost. Operations managers often use the percentage of customers derived from marketing to measure the performance of the Marketing Department. However, this marketing KPI is best used in conjunction with a return on advertising investment indicator. By combining these two operational metrics, the company can delve into its advertising performance.

It is worth noting to indicate the environmental, operational key performance indicators. Among them are reduced water usage and wastewater emission, decreased energy consumption and non-renewable resources usage, reduced hazardous inputs usage, and polluting gases emissions. Such sustainable social operational indicators as percentage of suppliers with up-to-date sustainable development policies, increasing the certified suppliers with ISO certification and number of community projects are also of great importance. Table 3.5 summarizes the operational key performance indicators.

Table 3.5.

The operational key performance indicators

Category	**KPIs**
1	**2**
Economic and financial	Operating cash flow,Operating profit margins, Quick ratio, Net profit margins, Quick ratio, Accounts receivables turnover, Cash conversion cycle,Accounts payable turnover, Days sales outstanding, Costs of shipments.

Staff	Employee satisfaction, Employee turnover rate, Response to open positions, Overtime hours
Marketing	Return on advertising spend, Lead conversion ratio, Cost-per-acquisition, Marketing-originated customer percentage
Social	Percentage of suppliers with up-to-date sustainable development policies, Increasing the certified suppliers with ISO certification, Number of community projects
Environmental	Reduced water usage, Reduced wastewater emission, Reduced energy consumption, Reduced non-renewable resources usage, Reduced hazardous inputs usage, Reduced emission of polluting gases

Strategic and operational KPIs are equally important -- they just provide different information for different purposes. However, there is often a disconnect between the metrics companies use at strategy board level and the metrics people use to measure performance on the shop floor. To achieve all the promise of the KPIs, strategic and operational KPIs must be aligned so that everyone in the business can see the link between what they are doing and business realization. To succeed, companies must develop and link strategic goals to operational goals, and then use appropriate KPIs to measure how the business aligns with those goals.

LITERATURE SOURSES

1. Ghalayini and Noble : The changing basis of performance measurement . International Journal of Operations & Production Management .1996
1. Peter Elwin: Rent and Resources: A Market Process Perspective, Entrepreneurship and the Firm: Austrian Perspectives on Economic Organization, 2001
2. Maness & Zietlow: Short-term financial management. 2005. 300 p.
3. Ernst et al : Integrating energy efficiency performance in production management – gap analysis between industrial needs and scientific literature 2011

4. Ajao, S. & Solomon S. : The Impact of Liquidity Management on Profitability 2016
5. Adam Hayes : The Institutional Framework and Economic Development 2021
6. Glossaries and Encyclopaedias on Academician : Financial stability of enterprise as the main precondition for sustainable development of economy 2011
7. Frederick Mishkin (Columbia University):Money, banking and financial markets
8. Sir Andrew Large: Financial stability - maintaining confidence in a complex World 2003

10. Tommaso Padoa-Schioppa (European Central Bank): The transformation of the European financial system 2003

11.Dimc: Value Based Management With Some Practical Examples In Slovenian Industries 2005 56p.

12. Morin and Jarell: Corporate Value Based Management Practices in India-A Theoretical Study of Selected Models 2001 220p.

13. Hasperslag et al. :Managing Acquisitions (2001)

14. Doˇcekalová and Kocmanova: economic development Related performance indicators For the environment, society and Corporate governance (ESG) factors 2012 p6.

15. Heorhiy Rohov, Sergiy Prykhodko, Oleh Kolodiziev, Volodymyr Sybirtsev and Ihor Krupka (2021). Factors of national environmental performance in sustainability management aspect. Problems and Perspectives in Management, 19(3), 70-84. doi:10.21511/ppm.19(3).2021.07

16. International Integrated Reporting Committee 2019 35p.

17. Hristov & Chirico,: Sustainability Value Creation, Survival, and Growth of the Company: A Critical Perspective in the Sustainability Balanced Scorecard (SBSC) 2019 https://doi.org/10.3390/su11072119

18. Rohov at al.:Factors affecting the dividend policy of non-financial joint-stock companies in Ukraine 2020 (ividend policy determinants of dividend decisions minority shareholders ownership structure emerging markets)

19. Sands et al: Assessment of economic vulnerability to infectious disease crises, 2016 154p. https://doi.org/10.1016/S0140-6736(16)30594-3

20. Jassem et al.: Family commitment and performance in private family firms: moderating effect of professionalization, 2018 55p.

21. Sands et al.,: Journal of Applied Sciences and Environmental Management 2016 16p.

22. Kalendera & Vayvaya, 2016; Hansen & Schaltegger, 2016 :The Fifth Pillar of the Balanced Scorecard: Sustainability, 202 .phttps://doi.org/10.1016/j.sbspro.2016.11.027

23. Hansen & Schaltegger: The Sustainability Balanced Scorecard: A Systematic Review of Architectures 2016 202p.

24. Cialis at All: Intangible assets and capital structure., 2015 103p.

25. Kalendera & Vayvaya,: The Fifth Pillar of the Balanced Scorecard: Sustainability 2016 80p.

26. Jassem et al.: Sustainability Balanced Scorecard Architecture and Environmental Investment Decision-Making , 2016

27. Woerd F. van der,: Feasibility of a Responsive Business Scorecard – a pilot study 2004

28. Bonacci and Rinaldi,: Strategy, Management, and Strategic Planning Approaches 2007

29. Becker et al: The HR Scorecard: Linking People, Strategy, and Performance 2001

30. Baba et al.: Key performance indicator of sustainability in the Malaysian food supply chain, 2019