

Defining criteria for recognizing the stages of individual crisis processes is one of the steps in the system of early detection and overcoming the financial crisis in the enterprise. Their purpose is to create an information basis for identifying the depth of the financial crisis as a whole, followed by the definition of adequate anti-crisis measures.

The development of the crisis at the enterprise requires from its management anti-crisis measures to influence the current situation, which are proposed to consider from the standpoint of pre-crisis and crisis management.

In order to highlight the peculiarities of the formation processes and the causes of crises of a particular type of financial and economic activity of the business entity in the work substantiated the need for cluster analysis of the studied enterprises separately for each group – liquidity, business activity, financial stability, profitability. In a crisis situation, management needs to mobilize all the capabilities of the enterprise and focus on their implementation. First of all, it is necessary to develop measures that inhibit the development of the deterioration of the situation and create conditions for the company out of crisis.

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#### GLOBAL SEMICONDUCTOR MARKET: CURRENT TRENDS

In my research I would like to study semiconductor industry and its development trends. The semiconductor industry is the aggregate of companies engaged in the design and fabrication of semiconductors. Technological innovations have a significant impact on semiconductor market and considering the current rapid pace of technological innovation, the semiconductor industry can expect to grow. After a relatively weak 2020, experts predict that the semiconductor market will recover in 2021 and continue to raise. Semiconductor sales totaled \$ 433 billion in 2020, compared to \$ 468 billion at its peak in 2018 [1].

The global semiconductor market is projected to grow by 8.4 percent by 2021, driven by increased memory capacity. The demand for chips associated with the rapidly growing use of artificial intelligence will make a significant contribution to the overall growth of the industry. The global chip market began to grow again in 2020, which was largely helped by the COVID-19 pandemic, as sales of computer equipment also increased due to the increase in remote work. Despite the market decline, sales of memory cards in 2020 increased by 13.5 billion, which corresponds to a 44% increase in the entire semiconductor industry. Consequently memory chips are expected to retain the largest market share until 2022. The rise in this segment will be driven by demand for artificial intelligence-related chips [2].

Semiconductors emerged in the 80's, when the first computers began to appear. Then, with the advent of the Internet and various technological devices, the need for semiconductors only grew. Nowadays, semiconductors occupy an important place in many industries. Demand in the semiconductor industry is generally fueled by breakthrough new technologies. Between 2017 and 2019, the rapid growth in the popularity of computer technology increased the demand for central processing units and memory chips, while the widespread penetration of the Internet led to an increase in the volume of Ethernet equipment, network processors and ASICs (special purpose integrated circuit). The smartphone era began with the introduction of the iPhone in 2007, driving demand for mobile processors, while the introduction of cloud computing pushed the growth of server processors and storage systems.

It's obvious that now artificial intelligence will be the catalyst that will lead to another ten-year cycle of growth in the semiconductor industry, as the active development of AI technologies in the development requires a large number of products of the global semiconductor market.

As the result semiconductor industry connected with artificial intelligence will grow from the current US \$ 1 billion to more than US \$ 1.5 billion by 2022, with a total annual growth rate of almost 50%.

While it is expected that AI use cases will eventually find their application in every segment of industry, their adoption will be determined by the amount of investment in the technology, the pace of its development and the speed of realizing its benefits.

Digitalization is being actively introduced in all spheres of life, thanks to this, the demand for technological goods is growing, which gives a huge boost to the semiconductor industry. Thus the semiconductor industry has been a pioneer in digitalization since its inception, offering digital services and pursuing new digital business models.

Currently, other industries, in particular the automotive industry, have clearly outpaced the semiconductor industry in terms of digitalization. This is ironic, given that automakers' own success in digitalization has been largely supported by products made by the semiconductor industry.

Thus, due to the growth in sales of products consisting of semiconductors, it is expected that the semiconductor market will actively develop in the next decade.

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## THE CONCEPT OF SUSTAINABLE DEVELOPMENT: BASIC PROVISIONS

In the 1970s, a number of scientific papers were devoted to the issues of limited natural resources, as well as pollution of the natural environment, which is the basis of life, economic and any human activity. The response to this concern was the creation of international non-governmental scientific organizations for the study of global processes on Earth, such as the International Federation of Institutes for Advanced Research (IFIAS), the Club of Rome, the International Institute for Systems Analysis, and in the USSR – the All-Union Institute for Systems Research. The holding of the UN Conference on the Human Environment in Stockholm in 1972 and the creation of the UN Environment Programme (UNEP) showed that the international community is interested at the state level in solving environmental problems that have become a constraint on socio-economic development. Environmental policy and diplomas, environmental law, and a new institutional component – ministries and departments for the environment have been developed [1].

Sustainable development is defined as development that meets the needs of the present, but does not compromise the ability of future generations to meet their own needs. The concept of sustainable development was formed as a result of the combination of three directions [2]:

1. Economic. From this perspective, the concept of “economic efficiency” is considered from a completely different angle. As it became clear, long-term economic projects that take into account the laws of nature, as a result, are more effective than projects that do not take into account possible environmental consequences [2];

2. Environmental. The main goal of sustainable development in the field of ecology is the stability of physical and ecological systems. Ignoring the needs of the environment will lead to environmental degradation and endanger the existence of all mankind [2];

3. Social. It was the awareness of social problems that led to the formation of this concept, aimed at preserving cultural and social stability, as well as at reducing the number of destructive conflicts [2].

The concept of sustainable development is based on five main principles [1]: