

Independence and accountability are also necessary to ensure good governance and prevent long-term decline in institutions. Poor governance and corruption not only harm the economy through short-term disruptions, but also have a detrimental effect on institutions, weakening their effectiveness. Central banks are not insured.

Thus, over the past few decades, central banks have overcome the path at first from almost complete mystery to understanding that it is necessary to communicate with the market, but in such a way that market participants cannot foresee the actions of the central bank, and ultimately to complete transparency and awareness that Monetary policy communications are themselves an instrument of this policy. As a result, central bank external communications today increase the effectiveness of a regulator's policy by explaining the logic behind decision-making, their causes and consequences, and helping the public, business, banks, and other clients and partners of the central bank make informed decisions, provide a clear picture of policy orientations and directions in the medium term.

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WAYS OF CONVERSION OF MILITARY PRODUCTION

The Defense-Industrial Complex is a major component of the functioning of the armed organization of the state and part of the complex military-economic mechanism of the Armed Forces of Ukraine. It is a complex structure consisting of sets of research, testing organizations and manufacturing enterprises. These enterprises develop, manufacture and supply military and special equipment, ammunition, equipment for the Armed Forces of Ukraine and are a source of financial resources to the state from the sale of high-tech products on the world market. A large number of enterprises and a significant concentration of resources in the defense industry have put conversion into a number of priority areas of industrial policy.

Conversion of military production is the state-regulated process of structural reform of the defense industry, which provides the reorientation of defense enterprises, the SRI (Science and Research Institute) release of civilian products on the basis of complete or partial withdrawal of military orders and implementation of a set of socio-economic, scientific and technical measures to redefine the defense complex.

In terms of economics, the defense industry's conversion is a redistribution of resources released to enterprises as a result of the reduction of state defense spending, and therefore represents a kind of adaptation process of enterprises to external conditions. Conversion should not endanger the country's defense and national security or to lead to the destruction of the defense industry, so this process must be regulated by the state. Main areas of conversion for defense industry are:

- Some of the products created in the military sector, has a dual appointment. It can be used in the civil sector without changing the technology of its production what allows to reduce military spending. This direction of use of military capabilities production provides almost no costs to change technological processes. But the problem of quality and competitiveness of products comes to the foreground, in this case.
- Another direction is the production of civilian products on the same equipment based on technology changes of military production. It relates to the products of mono-purpose and is comes down to such structure of technological operations and component layout, whereby military products are classified as civil. It requires little costs because it is not related to processing of new types of raw materials.
- Implementation in civil production construction materials and technological processes used to create military equipment.

One of the most perspective direction is diversification of production. It is an expansion of activity of large firms, associations, enterprises and entire industries beyond the core business. As a result of diversification, firms become multi-sectoral, and they penetrate in the new science-intensive industries, they are rebuilding their traditional production facilities with modern technological and organizational level. Special attention is paid to attracting highly qualified employees. Having high level of R&D work (research and design work), the right development strategy, knowing the market situation well, the company plans new directions of production expansion and reserves of their realization.

Diversification is associated with large investments in retrofitting and the creation of new equipment, however, provides mobility of labor and financial resources from one sphere to another, increases the flexibility of production as a whole, allowing you to respond quickly to change market conditions and be a guarantee of financial stability of the enterprise. Diversification involves using not only our own technology and equipment, but also civilian, even the latter to a greater extent. The company buys equipment and quickly learns technology through high qualification of its employees. Diversification allows military manufacturers of the same type and expensive products, to reduce its costs due to the need to improve the technological process for the production of batch products for civilian use.

However, the transition within the conversion of advanced technology-intensive technologies and equipment for the release of new civilian products is not as simple as it may seem at first glance. When conducting a business conversion, there is a need for a radical change in its competitiveness strategy. This involves solving quite complex problems in the field of production and financial management. On in practice, these tasks are to build a financial management system for a conversion business, minimization of current costs that shape the cost of production, development of in-house technology managing your conversion business resources and more. The solution to these problems is impossible without carrying out detailed financial analysis of the conversion business. Indicators of a successful conversion:

1. Novelty orientation;
2. Involvement in complex projects to re-profile the production of specialist firms, especially in such underdeveloped areas of defense enterprises as marketing, working with the consumer;
3. Careful control of both production and consumption of products;
4. Reduction of production costs (improvement of price / quality ratio);

Conversion of military production should be part of the overall plans of the development of the national economy and its implementation should ensure the solution of such problems: preserve the unique potential of military production, which is vital to meeting the needs of the armed forces, expand the industrial base to meet the needs of the defense, providing a transition from concept military-industrial base to the concept of a single industrial base, facilitate the conversion and

expansion of the product range of military enterprises, improve the system of financing defense facilities within the overall economic strategy, meet the key needs of the armed forces in R&D, improve the ways and means of assisting personnel in closed military installations and local people involved in their livelihoods, reduce costs by rapidly reducing excess capacity by encouraging and subsidizing merger and consolidation.

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TIME SERIES METHODOLOGY FOR OPTION PRICING: EMPIRICAL TESTS

Option pricing has been a significant area for research in finance since publication of work by Black, Scholes and Merton, who developed a noted model for estimation of options' fair value, which is still used today. [1] Nevertheless, there are some major drawbacks of the Black-Scholes model, such as assumption of constant volatility and constant risk-free rate which are not true in real world. One of the realizations of these drawbacks is "volatility smile" – an empirical relationship between strike price and implied volatility for options with the same underlying asset and maturity date.

In order to make more precise estimations of option's fair value based on historical data, various researchers tried to develop models that incorporate either dynamic volatility, or dynamic risk-free rate, or both. One of the most eminent works in this field is done by Jin-Chuan Duan, who developed an option pricing model based on GARCH process of Bollerslev. [2] This work is aimed to test performance of Duan model on modern data, compare it to classic Black-Scholes model and make relevant conclusions.

Duan model is built on locally risk neutral valuation relationship (LNRVR, which is fully described in original paper by Duan), which implies that asset return process that follows GARCH(1,1) under physical measure, under LNRVR can be described as: [3]

$$\ln \frac{X_t}{X_{t-1}} = r - \frac{1}{2} h_t + z_t h_t, \quad (1)$$

$$\text{where } h_t = \alpha_0 + \alpha_1 (z_{t-1} h_{t-1} - \lambda \sqrt{h_{t-1}})^2 + \beta_1 h_{t-1},$$

$$z \sim N(0,1)$$

r - one period riskless rate of return.

It can be seen that asset return doesn't follow classic GARCH(1,1) process anymore and thus cannot be estimated in standard statistical packages. Still, parameters of the (1) can be