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**CONDITIONS OF FOREIGN INVESTORS'  
INVESTMENTS IN THE AGRICULTURAL REAL  
PROPERTY MARKET**

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Key words: agricultural real property market, conditions of investments.

**A b s t r a k t**

The paper presents financial-economic and strategic conditions in the market of agricultural real property for foreign investors. The significance of the presented conditions was represented in the format of a model of the so-called strategic investment card as a complex approach to implementation of investment in agricultural real properties. The verification of the model was conducted on the example of Majmławki farm. The evaluation of the investment was defined in the aspects of economic, market, and social-environmental effectiveness as well as the so-called investment options.

**UWARUNKOWANIA INWESTYCYJNE RYNKU NIERUCHOMOŚCI ROLNYCH  
DLA INWESTORÓW ZAGRANICZNYCH**

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Słowa kluczowe: rynek nieruchomości rolnych, uwarunkowania inwestycyjne.

**A b s t r a k t**

Przedstawiono uwarunkowania finansowo-ekonomiczne i strategiczne dla inwestorów zagranicznych występujące na rynku nieruchomości rolnych. Istotność przedstawionych uwarunkowań zaprezentowano w postaci modelu tzw. strategicznej karty inwestycyjnej jako kompleksowego podejścia do realizacji inwestycji w nieruchomości rolne. Weryfikację modelu przeprowadzono na przykładzie gospodarstwa rolnego Majmławki. Ocenę inwestycji zdefiniowano w aspektach: efektywności ekonomicznej, rynkowej, społeczno-środowiskowej oraz tzw. opcji inwestycyjnych.

## Introduction

The crisis that appeared in the American real property market in 2005 caused that the current situation is the worst in 17 years. The negative phenomena of that crisis also reached the Polish market causing a decrease in demand for real properties. The analysts see no indications of revival in demand for real properties in the nearest future. The increase by 79% in the number of implemented collection procedures against real properties is in turn the consequence of the crisis in the mortgage loans market. In total more than 1% of families in the USA were deprived of almost 1.3 million apartments and houses, more than one million from July through December of 2007. During the whole year 2.2 million proceedings were initiated; their number during the fourth quarter of 2007 was 642,150 and they concerned seizure of 527,740 real properties ([www.nieruchomosci.beck.pl](http://www.nieruchomosci.beck.pl) 2007).

The crisis was the most severe in the segments of residential and industrial real properties. It was less severe in the segment of agricultural real properties. Nevertheless, the whirls in the real property market force the investors to improve the methods for evaluation of investment profitability.

Agricultural real properties<sup>1</sup> have become, as of the early 1990s, an attractive form of capital investment as a consequence of continually increasing prices, which was influenced by numerous factors. The main factors include natural, spatial-organisational, technical, land improvement and spatial ones. The basic attributes influencing the value of agricultural real properties were the area of the real property, availability of technical infrastructure, neighbouring real properties, access to means of transportation, location and fertility value (ŁAGUNA 2001).

Implementation of investment projects in agricultural real property requires now a comprehensive approach to the issues related to assessment of economic effectiveness and valuation of risk involved in the studied market. The process should focus in particular on the measures of effectiveness of a given project covering, in addition to economic effectiveness, also the social and environmental effects as well as benefits resulting from the so-called investment options.

The paper aims at presenting a model for evaluation of effectiveness of investments in agricultural real properties by foreign entities considering the practical aspects related to financial-economic and strategic conditions. The studies were conducted on the basis of Majmławki farm. The paper uses the project method that involves defining of the investment model in the format of

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<sup>1</sup> Agricultural immobilities in special cases can consist with only land uses, usually also from plotting on soils – both building how and vegetable – (ŁAGUNA 2001).

the strategic investment card and the following methods: NPV (Net Present Value), IRR (Internal Rate of Return), DPB (Discounted Payback Period) as the methods for evaluation of economic effectiveness of the investment.

### Strategic investment card as a model of investment in agricultural real properties

The concept of the Strategic Investment Card (SIC) is related to the process of investment in agricultural real property (Fig. 1). It serves defining the cause and effect relation between numerous factors influencing profitability of the investment. The SIC represents defining, on the basis of the business concept, of three perspectives of the investment in agricultural real property: economic, marketing and personal at the same time defining the method for measurement of the specific perspective while valuating the effects in the economic, social and market aspects as well as the so-called investment options.

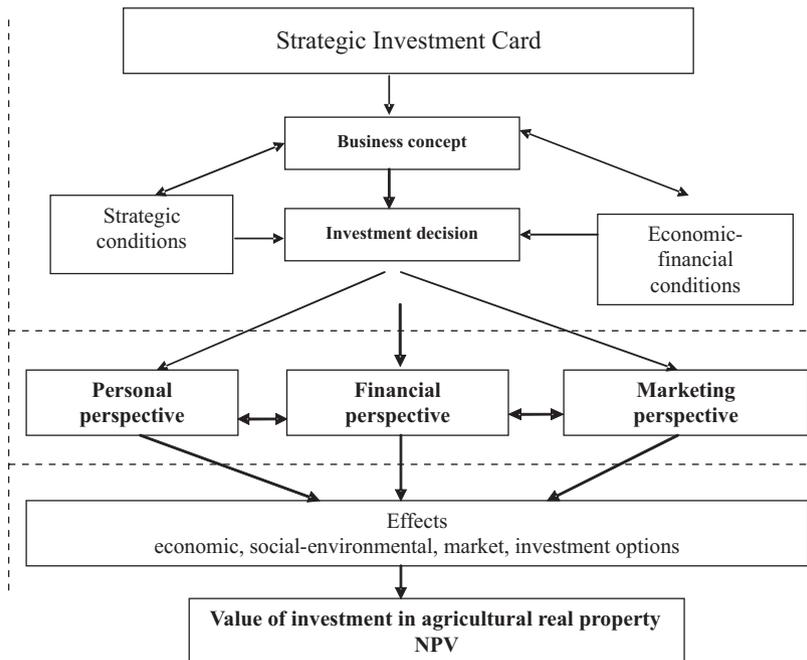


Fig. 1. Model of the Strategic Investment Card

Source: Own work based on KOZŁOWSKI (2007).

The rationale for the business concept of investment in agricultural real properties that should define elements such as:

- premises for a given project: market, marketing, social, economic, strategic;
- projection of benefits expected from a given project – increase of agricultural production, improvement of product quality, diversification of trade offer, increase of land value;
- valuation of investment options related to implementation of a given project or resignation from it; what will we achieve if we go for the project and what will happen if we do not implement it;
- valuation of risk related to project implementation in general terms – valuation of risk level or its type;
- defining the costs and time for implementation – cost of capital, schedule of work implementation;
- evaluation of profitability of the investment: economic, social, environmental and obtaining so-called investment options, is the starting point for the strategic investment card.

The business concept of the project is determined by two most important types of conditions: economic-financial and strategic ones.

### **Conditions of implementation of investment in agricultural real property**

Considering foreign investments in agricultural real property two major sources of conditions have been defined: financial-economic and strategic. The first ones result from premises and phenomena of macro and microeconomic character. The second group of conditions is linked to the goal of investor's activities and his plans for the future.

#### **Financial-economic conditions**

Financial standing, financial risk, financial planning type and investment options can be treated as the major financial premises for investment in agricultural real property (ZIARKOWSKI 2004). The important premises of economic character include macroeconomic situation, economic-sociological phenomena and phenomena taking place in the world that frequently reach Poland with a delay of a few years.

The above premises determine the decision criteria related to investment in agricultural real property defining at the same time the investment ability and strength of the investor. Figure 2 presents the model of conditions occurring in the process of decision taking in the market of agricultural real properties.

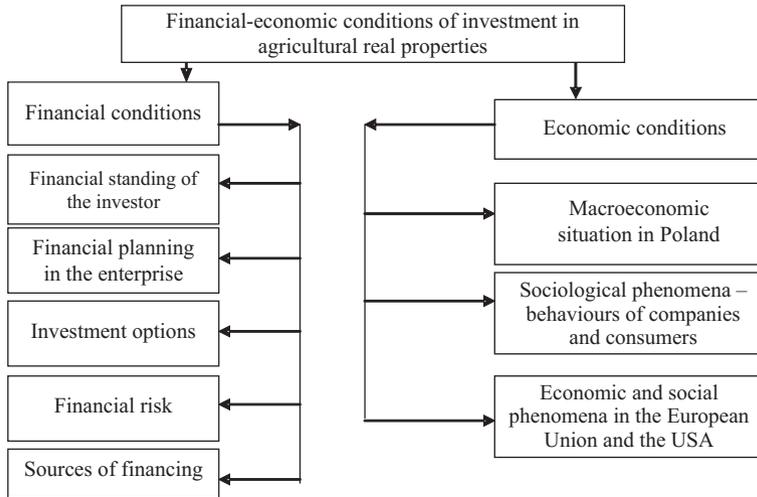


Fig. 2. Financial and economic conditions of investments in agricultural real properties  
 Source: Own work base on WOŹNIAK-SOBCZAK (2001).

The financial and economic premises of investments in agricultural real properties presented in figure 2 determine the baseline (marginal) conditions determining the investment strategy of the given entity. Those premises influence to a large extent the choice of decision criteria concerning the investment in agricultural real properties (PASTUSIAK 2003).

### Strategic conditions

The assumed investors' operational strategy that determines the investment types and scenarios as well as the criteria of economic profitability assessment and the risk level represents the starting point in implementation of an investment policy (WOŹNIAK 2001). Table 1 presents types of investment in agricultural real properties. The development strategy is the basic criterion for the categorization of investments.

The phase in which the investor currently is constitutes an important criterion influencing the type of investment in agricultural real property. If the investor were in the **growth phase**, he would be focused mainly on new investments thanks to which it would increase its production capacity and strengthen the technical infrastructure. At that phase the investor might generate negative cash flows and low current rate of return on the capital invested. The strategic goal is to increase revenues and sales of agricultural production.

Table 1

Types of investments in agricultural real properties – development criterion

Focus on one activity	Vertical integration	Diversification
Investment aiming at development of current agricultural production	qualitative investments – improvement of agricultural culture	investment involving change of activity profile – agritourism
Investment in sales markets	investment of infrastructural type	investments in products, services
Investment of modernisation type	investments of speculative type – waiting for increase in value	investments of extensive nature

Source: Own work based on own studies.

The investor at the **retention phase** is focused mainly on increasing the production capacity and continuous improvement of production processes. The investments in agricultural real properties are mainly investments of modernisation and replacement character. Investor at the **mature phase** is focused on harvesting the gains from the investments made during the preceding phase. The investments in agricultural real property are of replacement type mainly and aim at retaining the potential. All projects must be characterised by precisely specified and short period of return. Maximisation of cash flows is the main objective.

The dependences occurring between the investment in agricultural real property and life phase of the investor are conditioned mainly by the financial objectives, which causes that investment projects possess different characteristics. All tangible investments are assessed according to the procedure of investment planning based on the discounted cash flows and they must be characterised by rapid and secure return on the capital invested. As a consequence the investor should be able to define the phase he is currently at and on that base define the investment strategy.

### **Profitability assessment of investments in agricultural real properties**

The process of investment in agricultural real property economic profitability assessment should be divided into stages implementation of which would allow appropriate implementation of the investment. Four major stages are identified (TROCKI, GRUCZA 2007). In addition to economic effects the investor also obtains market, social, environmental effects and so-called investment options the valuation of which is necessary for comprehensive assessment of the project of investment in agricultural real property.

## **Methodology for profitability assessment of investments in agricultural real properties**

Aiming at appropriate implementation of investment process according to the Strategic Investment card (SIC) assumptions, four major stages allowing appropriate assessment of investment profitability have been identified.

### **Stage I**

Defining scenarios possible for implementation as operational scenarios.

ZACHARZEWSKA (2007) identifies four baseline scenarios:

- real property purchase and conduct of agricultural production,
- real property purchase and cessation of any agricultural production while maintaining the land in good agricultural culture;
- further lease and conducting agricultural production;
- further lease and cessation of any agricultural production while maintaining the land in good agricultural culture.

### **Stage II**

Defining the marketing concept. It is assumed that at stage II the following would be determined:

- demand for products;
- scale of demand;
- intensity of competition;
- concept of appropriate promotional activities;
- production programme;
- projections of sales prices.

### **Stage III**

Assessment of the investment project functioning. At stage III the following is done:

- projection of profit and loss account, balance sheet and cash flow;
- defining categories of costs and revenues related to the specific investment in agricultural real property. The major categories of revenues could include: the value of main product, value of side product, subsidies to the product, subsidies to the cultivated area and increase in value of the agricultural real property. The major categories of costs might include: investment outlays, rent, taxes and fees, direct costs of production indirect costs of production;
- computation of **NPV and IRR** as the main criteria for assessment of profitability of an investment in agricultural real property;
- financial indicators – final assessment of the investment project version.

### **Stage IV**

Taking the decision as concerns the choice of scenario for the investment in agricultural real property.

The methodology of profitability assessment represents an element of the Strategic Investment Card model and covers the aspect of the **business concept and analysis of investment conditions** for investment in agricultural real property. The above methodology is the most important area in the investment process as its correctness and accuracy determine the further success of the project.

### **Model (SIC) application for assessment of investments' effectiveness based on the example of a farm**

Majmławki farm situated in the municipality of Sępólno, Bartoszyce county, Warmia and Mazury voivodship is the subject of this study. The farm has the total area of 207.3 ha, including 2152.4 square meters of usable area of buildings. The fertility class representing 45% of the weight of all the market characteristics and natural-location values representing 25% of that weight are the basic factors influencing the value of the subject real property (ZACHARZEWSKA 2007). Investment in the subject farm, according to the assumptions of the model (SIC) will give economic, market and social-environmental effects as effects related to the so-called investment options. The individual assumptions concerning the effects are presented below (Table 2).

**Economic effects** related to obtained funds can be defined by applying the profit or cash flow, level of investment profitability, values of NPV, IRR, DPB and increase in value of the agricultural real property. Analyses indicate that only scenario number 1 related to purchase of the real property and conducting agricultural production offers substantial economic effect related to obtaining positive values of NPV, IRR and DPB.

Table 2

Economic assessment of investment in the studied farm

Economic effectiveness assessment method	Investment scenarios $n = 15$ years, costs of capital = 5,8%			
	I	II	III	IV
NPV	390 000 PLN	- 1 980 893 PLN	- 168 081 PLN	- 46 000 PLN
DPB	13,2 years	-	-	-
IRR	8%	-	-	-

NPV – net present value, IRR – internal rate of return, DPB – discounted payback time

Source: Own work based on ZACHARZEWSKA (2007).

**Market effects** – involve such elements as share in the agricultural production market, diversification of products and services, increase of the

share in Client's portfolio and geographic expansion. The basic market effects of scenario 1 implementation are:

- increase in volume of agricultural production per 1 ha of crops by 30% within 15 years;
- increase in process for agricultural products by 150% within 15 years.

**Social-environmental effects** - creating new jobs, improvement of agricultural culture, new prospects for farm development and regional development. The major social-environmental effects of investment project implementation are:

- good farm location – access, technical infrastructure and closeness to sales markets;
- good natural conditions;
- high fertility of soils – majority of land in classes IIIb and IVa.

**Effects related to obtained options** – possibility of using natural resources, possibility of expansion, possibility of being the market leader, development of market trends consistent with behaviour of consumers – tourism, increase in demand for agricultural products.

The major options related to the investment<sup>6</sup> could include:

- projected increase in land value by 5–10% per year,
- increased demand for agricultural products,
- increasing importance of agricultural-food industry,
- socio-economic phenomena linked to increase in demand for food from ecological regions, healthy nutrition, etc.

Option types obtained from investment in the subject farm are presented in Table 3.

According to projections, investment in the subject farm will offer benefits from the so-called investment options that can be divided into 3 types:

Table 3  
Investment growth options obtained through the investment in the studied farm

Option name	Option characteristics	Date of execution	Option direction
Economic	food from ecologically clean areas	up to 50 years	growth
Social environmental	– movement of the population to ecologically clean areas,	up to 50 years	growth
	– striving of the society for better living quality,	up to 50 years	growth
	– increased population expenditures on ecological tourism	up to 50 years	growth
Location	nearness of the eastern border – opening of the eastern market to agricultural food products	up to 50 years	growth

Source: Own work based on own studies.

economic, social-environmental and location. The time for implementation of the options was assumed at 50 years and all of them have the growth option, which means that they can give the investor additional benefits in the future. For today, however, we are unable to estimate the value of those options.

## Conclusion

Investments in agricultural real properties, because of their specific characteristics, require high diligence and care during preparation. This results from the high number of conditions that have direct or indirect influence on their profitability. The Strategic Investment Card model allows determining the cause and effect relation in the investment process; it is a tool that facilitates implementation and assessment of profitability of the investment in agricultural real property.

The primary premises resulting from strategic investment card preparation include the necessity of defining the business concept and investment potential based on strategic and financial-economic conditions related to investment activity in the market of agricultural real property market. Defining the schedule for preparation of individual components of the strategic investment card is important. Preparation and implementation of investment require from the entrepreneur possession of vast and continually updated knowledge and wide information on the market and national economy. Effective and profitable investing requires appropriate preparation of the investment projects. Unsuccessful investments, bankruptcies, takeovers and mergers of enterprises confirm that extensive knowledge on the specific area is required from the manager.

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