The residential real estate market plays a key role in the economy, influencing many aspects of it. It is an important sector that contributes to economic growth through construction investments and the generation of jobs in the construction and related industries. The value of residential real estate is also a significant part of household wealth, which translates into the level of consumption and the willingness to invest. Price stability in the real estate market affects consumer and investor confidence, playing a key role in shaping economic sentiment. This market also has a direct impact on the financial sector. Fluctuations in house prices can lead to serious consequences for financial stability, as exemplified by the global recession in 2008. In addition, residential real estate acts as a capital hedge and is an important investment element, especially in periods of economic uncertainty. Properly implemented policies can counteract housing crises and reduce social inequalities by ensuring access to housing for various social groups. Thus, the residential real estate market is not only one of the basic segments of the economy, but also an instrument for achieving social goals and supporting sustainable development.

Residential real estate therefore plays a fundamental role in the life of every person, being not only a place of residence, but also an important element shaping the stability and quality of life. They are a key asset of households, and decisions related to their purchase, sale or rental are largely determined by economic factors, such as income levels, the situation on the labour market and financing costs. Today's residential real estate markets are characterized by high dynamics and complexity, which makes forecasting price changes not only a challenge, but also a necessity for effective management at both the individual and macroeconomic levels.

This paper is devoted to the issues related to forecasting changes in housing prices, with the use of selected indicators of technical analysis. Price forecasting in this market is a challenge that requires a combination of economic and statistical knowledge and modern analytical tools. Commonly used in financial markets, technical analysis can provide new perspectives and methodologies for forecasting changes in real estate prices. The paper presents the application of this method to the analysis of historical data in order to identify trends and potential turning points in the housing market. This approach allows for more accurate forecasts that can provide significant support to both investors and policymakers

shaping spatial development and housing policies. A comparison of forecasts concerning changes in the residential real estate market, formulated by real estate agents, with actual changes that have taken place on the market, has also been made.

The main objective of the study was to assess the effectiveness of signals generated by technical analysis indicators in predicting price changes in the residential real estate market and to compare the results with the predictions of professionals – people professionally involved in real estate brokerage. The analysis of the indicators' indications covered changes in housing prices in all voivodeship cities in Poland in order to take into account the full spectrum of factors shaping the real estate market on a nationwide basis. Voivodeship cities are characterized by a diverse profile of economic, demographic and urbanization development, which creates the basis for a more thorough analysis of general trends and dependencies shaping the price level on the housing market. Capturing these differences in the study enabled a comprehensive analytical approach to be adopted, conducive to the identification of both common patterns and regional differences in property prices.

The focus of forecasts formulated by brokers only on the capital of Warmia and Mazury – Olsztyn – results from the need for an in-depth analysis of local conditions determining the functioning of the real estate market in this area. Olsztyn, as a representative of smaller voivodeship cities, has specific economic, demographic and social characteristics that can shape real estate prices in a different way than in the case of larger urban agglomerations. Limiting the forecasts to one city also allows for a more in-depth use of the expert knowledge of local intermediaries, who have detailed knowledge of regional specifics and a better understanding of local conditions, needs and dynamics of the real estate market.

The combination of a broad-based analysis of indicators on a national basis with targeted forecasts for Olsztyn enables a balanced and multidimensional research approach, integrating macro- and micro-regional perspectives. Such a strategy makes it possible both to capture macroeconomic trends and to focus on the microeconomic aspects of the local market, which enriches research results and increases their usefulness.

The dissertation consists of five chapters supplemented with an introduction, lists of tables and figures, a bibliography and an appendix. The first chapter is devoted to the

discussion of forecasting on the real estate market in the light of key trends in economics, as well as its importance and goals. Business cycles and factors influencing the formation of residential real estate prices were analyzed, and the specifics of the functioning of this market were discussed. The second chapter discusses theoretical aspects related to the residential real estate market. The characteristics of the market and the entities operating on it have been carried out. The determinants shaping price changes on the real estate market are characterized, as well as the financial market instruments related to its structure and functioning are presented. An attempt was made to identify the factors determining the level of prices on the residential real estate market. The importance of aid programs supporting the purchase of housing and their impact on prices on the housing market were indicated. The role of indirect investments is emphasized, and selected methods of measuring price changes in the residential real estate market are presented. The third chapter presents the theoretical assumptions of technical analysis, its tools, as well as the adaptability of this method of forecasting price changes. The purposefulness of using this method in the context of the specificity of the functioning of the residential real estate market has been justified. Selected indicators of technical analysis are presented, their construction and potential application in the residential real estate market are discussed. The fourth chapter concerns research methodology, research assumptions, and also presents the objectives, hypotheses, scope of research and data sources. The fifth chapter of an empirical and research nature presents the results of the analyses and comparisons carried out, constituting the basis for the formulation of conclusions regarding the examined issues.

The conducted research indicated significant differences in the level of accuracy of the Indicators' indications, and the percentage of correct forecasts ranged from 52.91% to 86.67%. This significant variation in the level of validity, exceeding 30 percentage points, indicates the uneven effectiveness of individual indicators in the context of forecasting the analyzed phenomenon. Some of the indicators used reflect the actual dynamics of the real estate market to a greater extent, while others show lower analytical adequacy or are more susceptible to misinterpretations in terms of the observed price changes. The answers provided by the brokers showed significant discrepancies with the actual price changes observed on the real estate market. By verifying the results achieved, it was found that the

indicators of technical analysis predicted future increases much better than decreases in prices, and the predictions of real estate agents as to the direction of changes were mostly accurate, while the scale of discrepancies in some periods remained relatively large.

The most important conclusions from the conducted research indicate that the effectiveness of indicators in forecasting changes in real estate prices is variable, and the selection of the right indicator is crucial to obtain the most accurate forecasts. At the same time, this indicates the great potential of selected indicators of technical analysis in the context of their use to forecast price changes in the residential real estate market and the need to adjust the parameters of the indicators to individual local real estate markets in each city individually.

On the basis of the conducted research, it is possible to indicate a number of application values that are important both from the perspective of business practice and further development of scientific research in the field of real estate price forecasting. First of all, the proven effectiveness of selected technical analysis indicators, such as MACD, ADX or CCI, in identifying turning points and periods of overvaluation and undervaluation of prices, indicates the possibility of their practical use by investors and real estate market analysts as tools supporting the investment decision-making process. The results of the research also suggest that technical analysis, traditionally used mainly in the context of financial markets, can be successfully adapted to the specifics of the real estate market, which is a significant added value from the point of view of the development of modern methods of market data analysis. It is also of particular importance to take into account the expertise of local intermediaries, whose forecast accuracy turned out to be higher than the effectiveness of the technical indicators themselves. Integrating know-how with quantitative data can significantly increase the efficiency of predictive systems, especially in the context of local market conditions not taken into account in models based solely on historical data.

Another important aspect of the conducted applied analyses is the possibility of adjusting the parameters of technical analysis indicators to the specifics of local real estate markets. Structural volatility between regions, differences in price dynamics and demographic characteristics of individual areas indicate that universal settings of indicators may be insufficient. The use of flexible methods of adjusting parameters to local conditions

allows for increased accuracy of forecasts and a more precise representation of real price trends. From an institutional perspective, the results can also be used by local government units and public institutions responsible for housing policy and spatial planning. The conclusions from the research can support the process of analysing local market trends and shaping policies that take into account regional specificities.

The interdisciplinary nature of the analyses is indicated by the integration of technical analysis tools with expert knowledge, opening up new possibilities in the construction of hybrid forecasting models, which can be developed for both scientific and practical purposes, constituting an innovative approach to the analysis and forecasting of phenomena occurring on the real estate market.